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JOURNAL OF INNOVATION IN EDUCATION AND PSYCHOLOGY

A National Level Peer Reviewed Bilingual (Tamil & English) Journal

VOL: 06 NO: 10 **MARCH - 2017**

Editor

Dr.P. SRINIVASAN
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Tamil Nadu, India.

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CHAIRMAN MESSAGE

I am very glad to know that every academic year, the Internal Quality Assurance Cell (IQAC) of Krishnasamy College of Education for Women has been sincerely involved to conduct the National Seminar based on the recent innovative themes. This year also, the college is organising a National Seminar on "Education in the Digital World" with the varies related sub-themes.

It gives me immense pleasure to know that the college has decided to organise this National Seminar particularly on the Digital World. It shows that this 21st century has adopted the new innovations and techniques in the recent Tech - world because the students are facing the traditional classroom climate which leads to boredom, tiredness and hopelessness in Education. So it is not only the duty of the teachers and the institutions to provide techno classroom climate but it is also their duty to provide opportunities to tide over their problems. The college is always a forerunner in introducing these types of innovative themes in National Seminars like

1. Inculcation of Values among College Students - 12-4-2014
2. Achieving Sustainable Clean India through Education - 26-3-2015
3. Means of Securing Youth Power for Disaster Management - 04-3-2016

I congratulate the Principal, Staff members and Student-teachers for organising the National Seminar on "Education in the Digital World" in the same line with previous years.

Moreover, I appreciate their sincere efforts to publish the seminar papers in the Journal of Innovation in Education & Psychology as a special issue Vol: 06, No.10 March 2017.

I wish the National Seminar to be a successful, fruitful and remarkable one.

Dr. K. RAJENDRAN MS., FICS., FAIS.,

(Founder Chairman)

ABOUT THE COLLEGE

KRISHNASAMY COLLEGE OF EDUCATION FOR WOMEN

Krishnasamy College of Education for Women (KCEd) was established in the academic year 2005-2006 catering to the needs of Teacher Education for Women. This college provides education, especially for downtrodden, socially and economically backward women. KCEd is situated in the south-edge of French tradition based Union Territory of Puducherry. It is in the midst of rural village named as Manapattu, of the Bahour Commune. It is a hop away from the south gate way of Puducherry and it is in the East Coast Road.

The Institution has been dedicating itself to the service of society by educating and preparing professionally qualified secondary level teachers for the last 12 years. The College is affiliated to the University of Pondicherry, recognized by the National Council for Teacher Education and accredited by NAAC. The College is also recognized under UGC 2(f) status. It is one of the best institutions under the umbrella of the prestigious Sri Subbulakshmi Krishnaswamy Reddiar Educational Trust in Cuddalore & Puducherry. The College has a good record of excellence and reputation and has a strong commitment to address to the needs arising from a dynamic and rapidly changing society.

The college is functioning with all infrastructural facilities as per NCTE Regulations December 2014, state-of-art ICT Resource Centre, Curricular Laboratories, Health and Physical Education Resource Centre (with Yoga Education), Multi-purpose Play Field, ICT enabled Seminar Room and ICT enabled Multi-purpose Hall, Art and Craft Resource Centre, Library-cum- Reading Room, Integrated Resource Centre and Psychology laboratory. The College is planning to introduce 4 year integrated B.Sc., B.Ed., Programme from the academic year 2017 - 2018 onwards.

BLOCK – A

WELL – EQUIPPED LABORATORIES

BLOCK –A	CHEMISTRY LAB
	

PHYSICS LAB	LANGUAGE LAB
	

ICT RESOURCE CENTRE	BIOLOGICAL SCIENCE LAB
	

ART AND CRAFT RESOURCE CENTRE	EDUCATIONAL PSYCHOLOGY
	

INTEGRATED RESOURCE CENTRE	
	

WELL STOCKED AND COMPUTERIZED LIBRARY WITH READING HALL	
	

BLOCK – B

BLOCK B	ASSEMBLY CENTRE
	

CLASS ROOM	LADIES STAFF ROOM
	

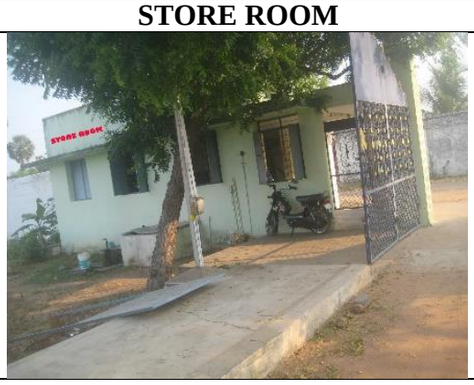
GENTS STAFF ROOM	SEMINAR HALL
	

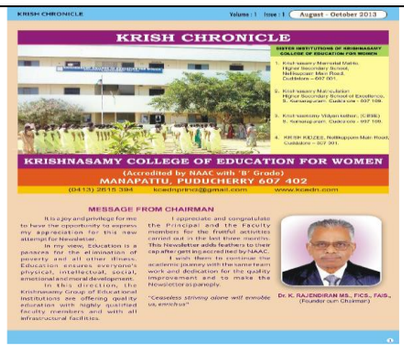
CO-OPERATIVE SOCIETY	PHYSICAL EDUCATION RESOURCE CENTRE
	

MULTI – PURPOSE HALL	
	

BLOCK C – PARKING AREA & OTHER FACILITIES

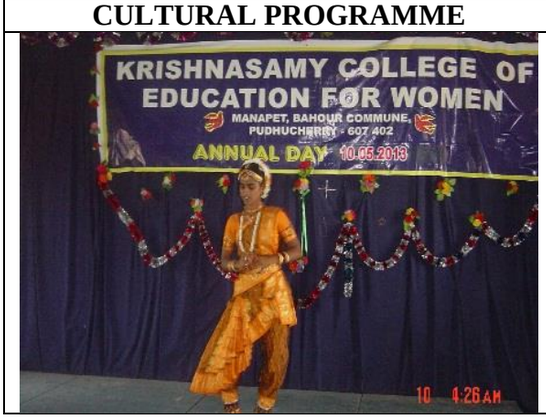
PARKING AREA	
	

TRANSPORT FACILITY	STORE ROOM
	

CANTEEN	NEWSLETTER – KRISH CHRONICLE
	

SPACIOUS, PEACEFUL & BREEZY CAMPUS	
	

COMMUNITY WORK	FACILITIES FOR SUPW WORK
	

CULTURAL PROGRAMME	GOVERNING COUNCIL MEET
	

ALUMNI ASSOCIATION MEET	GRADUATION DAY
	

SEMINAR DIRECTOR'S NOTE

Dr.R. MUTHUMANICKAM
Former Professor of Education & Principal,
Krishnasamy College of Education for Women,
Puducherry -607 402
Cell :9443149383
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Technology enables education to adopt student – centric methodology with higher connectivity and sustainability of interest. The higher order thinking and effective learning are facilitated by the teachers with the help of technology. The students and teachers should act as the change seekers and change makers. The rapid digitisation further necessitated a change in the education system in the country to face the challenges, and how best the students and the teachers can adapt in the teaching, learning and assessment methods. Internet has changed the whole education system over the years. Today, it is a primary source for the classroom and allows for more open and rapid communication between teachers and students and among themselves. Let us take the advantages of this rapidly moving digital technology.

The digital technology demands a changed mind set on learning, teaching, assessment and both in general and financial management in the education sector. The time-table preparation, fee collection, student information management and result generation are a few areas where technology play a vital role to save the precious time of the teachers. The students can easily access their daily timetables, and daily activities. Further it can increase the level of transparency in the education system, particularly among the teachers, the parents and the students. All these activities are becoming easier through digitalization.

21st century educational objectives given in the UNESCO (1996) Document contains four objectives namely, - Learning to know - Learning to do - Learning to live together and -Learning to be for all member countries including India. All these objectives can be achieved through digitalization. Transnational Education (TNE) refers to real or virtual movement of Students, Teachers, Knowledge and Academic programmes from one country to another and it is possible only through digitalization.

The following are the conscious and reflective changes in the education process due to digitalisation - Reaching unlimited number of students -Learner as active member -Learner centred teaching - Interesting classroom environment -Current information processing -Networked information -Multimedia usage -Social learning -High quality learning –Flexibility -Transparency - Avoiding psychological tension -Lowering Education expenses with high effect.

In this direction, the College with the guidance and support of the management has undertaken this National Seminar on "Education in the Digital World" with four sub-themes. I am being the Principal record my sincere thanks to the Editor and Editorial Board of the "Journal of Innovation in Education and Psychology" ISSN 2249-1481 for bringing the special issue, March 2017 incorporating all the papers. I thank all the Faculty Members, Resource Persons, Participants, Paper Presenters and all others helped in one form or other for the successful completion of the publication and the National Seminar.

ABOUT THE SEMINAR

THEME: - EDUCATION IN THE DIGITAL WORLD

In this Digital World, people are inter connected through digital devices and media. Today the world is full of ideas, opinions, learning and opportunities which are transferred through the electronic devices to one person to other person. These knowledge transformations through digital mode makes education Boundary less, Flaw less, Paper less, Person less, Gender less, and Pleasurable. It helps one to be more aware about the 21st century world in all walks.

SUB THEMES : Learning and Teaching in the Digital World, Evaluation in the Digital World, Educational Management in the Digital World and Financial Management in the Digital World

SUB THEME 1 : LEARNING AND TEACHING IN THE DIGITAL WORLD

The digital world has revolutionised the whole system of education particularly teaching and learning process. Today the focus is more on learning rather than teaching. The role of the teacher is changed as the “Facilitator of Learning” and the ocean of information on internet enabled the teacher to be a “Sorter of Information” (UNESCO,1996) in learning. Today, “How to Learn” is becoming much more important than “What to Learn”. The digital revolution is creating a new system of paperless teaching and learning process.

SUB THEME 2 : EVALUATION IN THE DIGITAL WORLD

Evaluation is a process of observing and measuring a thing or a person for the purpose of judging its effectiveness and values. Today, the system of evaluation is becoming online and paper less. The evaluation of written test is also digitalized. The Continuous and Comprehensive Evaluation (CCE) and External Examination (EE) are being gradually digitalized. But in India, the scenario is not as in the advanced countries. But there is an abundance scope for the digitalization process in India. The paperless evaluation system may be eco-friendly.

SUB THEME 3 : EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

The 21st century has witnessed tremendous advancement in all walks of life due to digitalization in all aspects of institution life. The effectiveness of institution is measured in terms of management which consist of planning, staffing, organizing, directing, coordination, motivation and control. Digitalization has created a thorough change in all aspects of the above said managerial functions. The paperless office and rapid communication system have thoroughly changed the whole system of educational management in the three levels (Primary, Secondary and Higher Education Levels). The efficient and effective management with accuracy is ensured through digitalization.

SUB THEME 4 : FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

The year 2016 was a remarkable year for Indians and business community around the world due to demonetisation of Indian currency. Today the focus in India is towards digitalisation of Indian monetary system through digital mode of fund transfer to all aspect of transaction even for a few rupees in a tea shop. One can understand the significance of digital mode of transaction in the educational institutions. Today, digitalization is enabling all the educational institution to manage the financial resources efficiently and effectively. The accuracy, speed, holistic nature, transparent and readily accessible nature are some of the benefits of digitalisation in the financial management.

SEMINAR ORGANIZING COMMITTEE

PATRON

Dr. K. RAJENDRAN, MS., FICS., FAIS.,
Founder Chairman,
Sri Subbulakshmi Krishnasamy Reddiar Educational Trust,
Cuddalore.

SEMINAR DIRECTOR

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Principal.

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B.A., B.Ed., D.C.A.,
Office cum Account Assistant

Mr. L. Gunaseelan B.A.,
Store Keeper &
Technical Assistant

RESPECTED RESOURCE PERSONS OF THE SEMINAR

SUB-THEME 1: LEARNING AND TEACHING IN THE DIGITAL WORLD

Dr. Mumtaz Begum,
Associate Professor,
Commonwealth Academic Fellow,
School of Education,
Pondicherry University.

Dr. D. SIVAKUMAR,
Principal,
CK College of Education,
Chellankuppam,
Cuddalore.

SUB-THEME 2 : EVALUATION IN THE DIGITAL WORLD

Dr. R. VIJAYAKUMAR
Assistant Professor,
School of Education,
Pondicherry University,
Puduchery.

Dr.(Mrs).G.NIRMALA,
Principal (i/c)
Krishnasamy College of Science,
Arts & Management,
S.Kumarapuram, Cuddalore.

SUB-THEME 3 : EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

Dr. M. BALAMURUGAN,
Associate Professor,
School of Education,
Pondicherry University.
Puducherry.

Dr. P.SRINIVASAN,
Associate Professor,
Department of Education,
Central University of Tamil Nadu,
Thiruvarur

SUB-THEME 4 : FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

Dr. A. THILAHA DHARMARAJAN,
Associate Professor,
Bharathidasan Govt. College for Women,
Puducherry

Mr. R. NATARAJAN,
Principal,
Krishnasamy Memorial Matric. Hr. Sec. School,
Cuddalore

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BRIEF NOTE ON

SUB-THEME 1: LEARNING AND TEACHING IN THE DIGITAL WORLD

Dr. Mumtaz Begum,
Associate Professor,
Commonwealth Academic Fellow,
School of Education,
Pondicherry University.

'Moving toward a Digital Future' is the order of the day and hence Learning/Teaching can be no exception to this Maxim. 'Learning encompasses four 'L's namely Lectures, Library, Laboratory and Life'. In fact, these are the Four Pillars which hold 'Learning Edifice' comfortably. No doubt 'Technology' occupies a pivotal position in all these four segments. Even though lots of studies are available to assess the Impact of ICT in Education, the outcomes hardly remain difficult to measure and are subject to criticism.

Everyone should clearly know that Technology is only an enabler and a force multiplier and it alone cannot be treated as a panacea. The much debated impressive gains in Teaching-Learning outcomes are only possible through an integrated approach rather than a piecemeal intervention. Can anyone dispute the fact that Technology makes the Teaching-Learning process very easy and at the same time interesting as well.

All of us fully agree, understand, and admit that nothing can ever replace the need of a Teacher even in this Digital Era. In fact, now only teachers carry huge responsibility and in order to deliver those responsibilities they invariably need certain skill sets. Unless and otherwise Teachers are strong in Technical Expertise, it may not be possible for them to contribute more in their Students growth in the 21st Century.

Technology is evolving every day and in this web based learning culture, Technical Skills and Critical Thinking are equally important for a Teacher so that they can think out of the box. If Teachers are equipped with all these qualities they will be capable of,

- ❖ Fostering better training in the Class Rooms and online environments.
- ❖ Efficiently utilizing Digital Media skills to upgrade Students quality.
- ❖ Effectively using Global Education Platform perfectly for regular update and upgrade.
- ❖ Work along with Students to help them grasp new learning opportunities for their potential growth.

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BRIEF NOTE ON

SUB-THEME 1: LEARNING AND TEACHING IN THE DIGITAL WORLD

Dr. D. SIVAKUMAR,
Principal,
CK College of Education,
Chellankuppam,
Cuddalore.

Teacher education is a fantastic education which almost everybody admires. The foremost issues are often talks about by general public is whether the current type of teaching works to current life style and whether these students when they come out from the school are able to take this world in a right way or whether this type of teaching leads them aloof to be the society.

Teacher education is the one and only reliable service available to society, not only to acquire knowledge, as well as competing with current world, which lack a lot at the current situation. In recent years reference to 'digital technology in the classroom' (DTC) can be taken to mean digital processing systems that encourage active learning, knowledge construction, inquiry and exploration on the part of the learners and which allow for remote communication as well as data sharing to take place between teachers and /or learners in different physical classroom locations.

This is an expanded notion of technologies that recognizes their development from mere information delivery systems and also clarifies their role in classrooms in contrast to their wider use across schools and learning centers.

I am glad that this National seminar will bring value to the teacher education, community and institutional networks in the country.

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BRIEF NOTE ON

SUB-THEME 2 : EVALUATION IN THE DIGITAL WORLD

Dr. R. VIJAYAKUMAR
Assistant Professor,
School of Education,
Pondicherry University,
Puduchery.

Education is always treated as lifelong process, in which learning too takes place where there is (no) clearly defined teaching objectives. Evaluation in any form reflects the assessment and value judgment of a person worthiness obtained in a defined course and programme. The influence of Educational Technology has drastically penetrated in all spheres of contemporary education world. Evaluation is trying also measures the Cognitive, Affective and Psychomotor intended to measure the degree of proficiency that the person or the teacher obtained. There are empty number of methods have been evolved to measure the digital assessment tool like electronic portfolios which measures the text, electronic files, visuals, multimedia, blog entries and hyperlinks etc., Multimedia evaluation crossed all the borders and boundaries of the world.

Digital world has extensively eased the process of evaluation in all spheres of the educational system starting from examination, interview, personality evaluation, skill assessment, creativity examination, expression, communication pattern, comprehension, language dissemination and content enrichment. Digital resources are the boon to the present generation as it caters to needs of the entire learner including children with special needs. Hence, present education system can fully relay on the way that the communication takes its leaps and bounce to disseminate the purpose by using technological synchronization for effective dissimilation not only education but also for evaluation.

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BRIEF NOTE ON

SUB-THEME 2 : EVALUATION IN THE DIGITAL WORLD

Dr.(Mrs).G.NIRMALA,
Principal (i/c)
Krishnasamy College of Science, Arts & Management,
Kumarapuram,
Cuddalore

I wish to register my heartiest congratulations to the team of organizers of 'Education in the Digital World". As our government is on a vigorous move towards 'Digital India', the publications in this seminar would be the most significant contribution from 'Krishnasamy College of Education for Women'.

Evaluation through digital media could be mostly done with a framework of questions. As the digital collections are regarded as both a resource and service, the evaluation should be focused on how they can be used by every individual user. The access and ideas of what to look for; should be clear from the presenter through which effective impact can be made by digitalization. Digital evaluation methods can be improved through different means ranging from training, conferences, test bed applications etc. Flexible and adaptable guidelines for the evaluation of digital presentations had also been published through various articles.

We hope and look forward for more innovative methods for digital evaluation from the participants and sincerely wish for the success of this national seminar.

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BRIEF NOTE ON

SUB-THEME 3 : EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

Dr. M. BALAMURUGAN,
Associate Professor,
School of Education,
Pondicherry University.
Puducherry.

ICT makes dynamic changes in society. It is influencing all aspects of life. The influences are felt more and more at schools. Because ICT provides both students and teachers with more opportunities in adapting teaching and learning, and managing the individual needs, society is forcing schools to aptly respond to this innovation. It provides newer and more effective ways of mitigating some of the challenges being faced by the educational system of the country.

Hence, Information and Communication Technology (ICT) plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified that technology can be used right from student administration to various resource administration in an education institution.

In pursuit of excellence, the school mission is to educate, guide and challenge all students to develop lifelong learning skills necessary to successfully contribute and compete in a rapidly changing global community. Principals and program leaders have sufficient technology available to support curriculum, instruction and assessment. Schools of the future must be open and flexible, focusing on learning. New communication should promote new collaborations and a higher level of cooperation and creative problem-solving. Educators must be supported in their use of new technologies for learning and also in their use of technology for professional development and collaboration. Learners (students, educators, parents, etc.) must be able to use technology to achieve new levels of learning and to acquire new information skills and abilities.

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BRIEF NOTE ON

SUB-THEME 3 : EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

Dr. P.SRINIVASAN,
Associate Professor,
Department of Education,
Central University of Tamil Nadu,
Thiruvarur

Not long ago, just fifty years back one has minimal ways to get the information. One has to get information from guru or from books. Even then one may not get the subject areas one need and at the required time. Learning was restricted to time, money etc. One could able to study one course only at a specified place and at a specified time. But, thanks to technological development, now we can have wealth of data on practically any subject at the single click of the mouse. Even learning to subjects was restricted. But due to the advent of technology now Massive Open Online courses (MOOC) have come up. Now one can learn on the go. Now we can practically learn any number of courses at any number of universities at the same time through MOOC at minimal cost or free of cost. In India also many universities are offering MOOC. UGC has made it mandatory for students to learn at least a course from MOOC.

Digitalisation has grown up. We have digital library. National Digital Library has been started at Indian Institute of Technology, Kharagpur. Therefore, we can have access to books and journals in huge numbers. Space and preservation problems has been reduced due to this. Distinguished lectures of professors of IIT and IIM have been digitalised, so that any student form anywhere can access and benefit from it. Learner Management System (LMS), Content Management System (CMS), Virtual University, have come into existence. Evaluation has become easier and objective now. Online Testing Service like IELTS and evaluation through scanning of OMR sheets are being practised. Quite a large number of educational apps have come. They make the way in educating the masses.

The Majority of teachers in this era are digital immigrants. They are way behind their students who are digital natives. Hence, there is an urgent need for the teachers to develop their technological skill, so that they can apply it in their classroom. To capture students' attention, teachers of today have to use Technological Pedagogical Content Knowledge in their teaching. I wish Chairman, Principal, Faculties of this college and faculties from other institutions and students for grand success of the National Seminar on Education in the Digital World.

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BRIEF NOTE ON

SUB-THEME 4 : FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

Dr. A. THILAHA DHARMARAJAN,
Associate Professor in Corporate Secretaryship,
Bharathidasan Govt. College for Women,
Puducherry

Artificial intelligence and automation, a new class of digital disruptors is transforming how business gets done. Researchers expect these disruptors to have a big impact on the future of finance organizations, which explores the potential impact of new technologies and the possible future of finance in the face of these developments. No matter what future executives see ahead for their finance organizations, one thing is sure. If business leaders in the organization are going to compete in the digital world, they will need to process more information more efficiently and turn that information into deeper insights faster than ever. It will likely require new technology and a group of people who are curious and skilled in using it.

Digital India has taken a fast pace after demonetization announced on 8th November, 2016. 'Less-cash' or 'Cashless' has emerged as the new buzzword in the Indian economy. Due to less cash available in the banking system, everyone is searching for cashless mode of payments. Online payments and debit and credit cards payments were the well-know available options for cashless transaction. Demonetization has invalidated approximately Rs 14,180 billion worth of high value currency, which is almost 86 percent of the total currency in circulation (total currency in circulation Rs 16,454 billion as on 31 March 2016). The Centre is making a big push for online and card-based transactions in the country to achieve its target of becoming a largely cashless economy. However, it seems the country is not ready for such an immediate shakeup. When the Prime Minister announced demonetization of 500 and 1000 rupee notes on the night of 8th November 2016, the reaction all over the country was one of stunned disbelief. The main object of this move was the curb of black money menace. Another motive of the government in demonetization was to create a cashless economy. Cashless transactions have the benefits of transparency i.e. all transactions can be traced and tracked.

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BRIEF NOTE ON

SUB-THEME 4 : FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

Mr. R. NATARAJAN,
Principal,
Krishnasamy Memorial Matric. Hr. Sec. School,
Cuddalore

CONGRATULATIONS TO ALL THE PARTICIPATING SCHOLARS!!

The financial management of an educational institution has become increasingly complex. Now many have switched over to increasingly sophisticated management information system(MIS). Today's educationists need a lot of awareness about MIS. The research papers presented under this discipline are really valuable.

Various digitilised systems have developed software packages to fulfil the needs of the MIS. The education managers, accountants why even the auditors are to get well versed with those MIS. As India is now dreaming about paperless management and financial transaction this topic takes a central stage. Many developing countries are currently in the process of introducing the use of computers into previously painstaking, hand-compiled ledger based statistical and financial record systems, greatly improving the fastness of availability and reliability. Such a system of MIS has been proved to be safe and far better in accuracy as well as efficiency.

The fully-developed MIS is neither merely computerization of accounts work nor does it provide ready answers to all the complex administrative problems. I request the learned community to go through these very valuable papers

Prof. Dembowski the great scholar of this field describes the digitalized financial system as an educationally facilitating system for in and out...from developing decisions in planning, budgeting, organizing, billing, controlling, initiating courses of action and auditing. All the papers in this session were informative and elaborate. I congratulate the scholars.

I congratulate the Krishnasamy College of Education for Women, Principal & team, the seminar organisers for having selected such a very fitting theme.

SUB THEME 1: LEARNING AND TEACHING IN THE DIGITAL WORLD

SUB THEME 2: EVALUATION IN THE DIGITAL WORLD

SUB THEME 3: EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

SUB THEME 4: FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

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A FEW ABSTRACTS

1. IS EDMODO A FACE BOOK FOR TEACHERS OF DIGITAL ERA? – THE ANSWER

Dr. K.SURESH, Guest Teacher Educator, Government College of Education, Orathanad, Thanjavur.
Mr. S. DEENADAYALAN, Asst. Prof., Krishnasamy College of Education for Women, Puducherry

Abstract

Teaching is social phenomena and learning is a psychological phenomenon. Education is the greatest tool to mould the students in the desirable way. Today, we are living in the age of technology and the students in the digital era are called "Gen Alpha". Gen Alpha students are born in the digitalized world. Each and every activity of the Gen Alpha students is done in enhanced level with technology. We are teachers from Gen X, Gen Y and Gen Z generation and we are called as 'Digital Immigrant'. Teacher is the key factor in the teaching learning process because he/she occupies more time to deliver the lecture. India is moving towards with the innovative process in the teaching and learning process by reducing papers. Introducing e-learning, e-content, web based instruction, online learning and virtual learning etc., are the online process for reducing the paper and save trees. If we reduce the papers by using online, lot trees may be saved. We are wasting lot of papers for giving notes, writing examination and announcement of results. Teachers have the responsibility to create awareness and reduce the wastages of papers by shifting to online process like e-learning, e-tutoring, e-evaluation, webinar and e-conferences and so on. Traditionally Teachers were giving assignment orally and the students were insisted to submit the assignment by hard copy and leads to the wastages of papers. Today, we are living in the technology enhanced surroundings and we have responsibility to use ICT in all our activities relevant to teaching-learning process. Edmodo is a 'face book' for teacher to reduce the paper by giving notes, questions and assignments to the students. The author of the paper has interested to create picture about Edmodo to the readers.

Keywords: *Edmodo, Face book, Gen Alpha, Millennial Gen, Digital Natives, Digital Immigrant*

The Points to Emerge:

India introduced technology in all the process especially in Teaching and Learning are so simplified with the help of ICT. Internet is a precious invention in the human Endeavour. Internet allows the teacher to share the ideas to the students and their parents in easiest way. The student and the teacher may communicate each other with their learning in their own pace. Internet allows 24x7 sharing ideas between teachers and the students. We are now shifting e-learning, e-tutoring, e-examination, e-evaluation and so on. In tradition, the teacher follows all the students' activities in the way of using papers. The students are 'Digital Native' and the teachers are from Gen X, Gen Y and Gen Z. Digital Natives students are mostly like to learn the learning in the digital environment. Teacher may introduce innovative things in teaching and the teacher move to digital environment. To introducing innovation for assigning tasks to the students through without paperless environment. Edmodo is a face book to the teachers to share their ideas to the students without papers and it is an innovative process in the Digital Natives of students. It is a webpage to make a collaborative learning and it is most fit for K-12 Students' learning. The following passages will assist the readers to make a picture about Edmodo and it uses.

Edmodo – What Is It Meant?

Edmodo is a webpage to the teacher to share the ideas to their students, colleagues and parents. It is offering by the educational technology company to communicate ideas and thoughts to the students and assist to collaborative learning. It is a coaching tool to the K-12 Schools and working teachers. It is a network to share network, distribute quizzes and provide assignments to the students. Edmodo was founded by Nic Borg and Jeff O Hara in the year 2008. In the year 2013, Edmodo was recognized and popularized by the PC Magazine with the quotes of 'The Top App for Teachers'. Edmodo launched a snapshot which is used as an assessment tool to measure student's standards and educational process. At present Edmodo reached to have 66,900,000 users across the universe. The generation transformation makes the communication in different way and they are using various communication devices. The communication devices and the respective generation are given below.

S.No	Year of Interval	Name of the Generation	Communication Device
01.	1990 – 1940	Veteran Generation(Ancients)	Paper
02.	1940 – 1960	Traditional Generation (Baby Boomers)	Mail
03.	1960 – 1980	Generation X	Mail and Telephone
04.	1980 – 1990	Generation Y	Mail, SMS and Cellular Phone
05.	1990 – 2000	Generation Y (Millennial Generation)	SMS, Email, Facebook
05.	2000 and above	Gen Alpha (Digital Natives)	Facebook, WhatsApp, Internet

These generations are using different communication devices. Today the students are using digital devices and they use face book, WhatsApp and internet to share ideas. Teacher should know the technology because the teachers are Digital Immigrant. Edmodo is an educational platform as well as social learning network in which the students and teachers can interact purposefully. It is a closed network, more secure and as soon as like as the face book interface. Edmodo is a learning management system (LMS) for student and the teachers. It permits the teacher to share ideas, post alerts, assignment, grades, and reminders and to conduct a poll or quizzes. On the other hand, the student may know their grades, can communicate with teachers in the own pace and time. Edmodo is simply called as a face book for schools, Teachers, Students and Parents of the students. It is a free and high secure social network for teacher, students and the parents. Teacher may create collaborative groups in the Edmodo networks.

Is Edmodo Different from Face Book – How?

Yes, it is entirely different from the face book. The Edmodo is a face book for teachers to share ideas and assign tasks to the students. It is an interface device to the teachers and the students. It is like a face book interface but it is different from the face book in the following manner:

- ✓ **Free Network** – It is a network of free cost to share the ideas between teachers and the students.
- ✓ **Privacy and Secure** - It is a secured platform. No private individual without be a member in the group can share ideas in this platform and the students may join in a group by inviting of the teachers.
- ✓ **Achieved** – All Teaching and learning communications are achieved
- ✓ **Own Management** – The management control is fully depending on the teacher
- ✓ **Create Polls and Quizzes** – Teacher who wants to assign Polls and Quizzes to the students in the paperless way
- ✓ **Parent Access** – Parent may access the Edmodo in the freeway. Parents may see the performance of their children's educational development without paper as in progress report.
- ✓ **Online Assignment** – Teacher may give assignments to the students and the students can submit the assignments during the time and it will not be accepted after time is across.
- ✓ **Engage** – It is designed by the teacher in the way of blended learning and it allows the students who are excited in their learning.
- ✓ **Connect** – Teacher is the central figure of this network and they connect the students, Parents and the colleagues.
- ✓ **Personalize** – It is easy to access and the teacher or the students can personalize the learning.
- ✓ **Measure** – It is used to measure the student learning progress.
- ✓ **Easy to Use** – Non-Tech students and teachers may use this face book by simple way

How to Register in Edmodo? – The Procedure

Edmodo permits the Teacher to interact with their student groups and it allows students to submit their assignments. Parents can know their child learning progress without paper wastages. The following steps may assist to register Edmodo.

Teacher may register in Edmodo websites for making group by using the following steps.

- ✓ Go to www.edmodo.com website
- ✓ Select the "I'm a Teacher"
- ✓ Fill up the registration form and Click 'Sign Up' button
- ✓ Check your email and manage your account as your wish

Student may register in Edmodo Account by making the following steps for submitting the assignments.

- ✓ Obtain 6-digit group code from your teacher
- ✓ Go to www.edmodo.com website
- ✓ Click "I'm a Student"
- ✓ Fill up the registration form with Group Code, a unique username, and password

Parent may register in Edmodo Account to know the learning progress of the child by making the following steps

- ✓ Obtain 6 or 9-digit group code from your child account (it is not as students group code)
- ✓ Go to www.edmodo.com website
- ✓ Click "I'm a Parent"
- ✓ Fill up the registration form with Group Code, a unique username, and password
- ✓ click Sign Up button

Is Edmodo a Facebook for TEACHERS OF DIGITAL ERA? – THE ANSWER

Yes. Edmodo is a face book for the teachers of digital era. Each and every movement of the activities of the Gen Alpha students **is like to introduce** ICT. But the teacher is now being ICT immigrant are **having trouble to introduce ICT in their teaching process**. The curriculum is shifted from teacher centered to student centered and hence teacher has more responsibility to adopt ICT in their teaching for reducing paper wastages. ICT enable the communication so simple than traditional. Today the students are so interested with ICT than hard copies. The hard copies occupy most of the places and ICT allows those hard copies are copied in a single chip by converting as a soft copy. By using soft copies will lead to reduce the wastages of the papers. The communication process is so simplified and **communicating quickly by the boon** of ICT.

Conclusion

For implementing innovative things in teaching learning process, the teacher may shift to Edmodo for doing such type of activities. It is a face book only for teachers and is most secure and privacy to them. Edmodo allows the teacher to post lecture notes, introduce Polls and Assignments, and evaluate students in the paper less environment. Teacher may create group in Edmodo and they may invite their students by using a keyword. The keyword

allows the students to join the group and may know the tasks which have to been done by students. The teacher may correct the assignments and evaluate the students' process alone. This interface allows the parents to know their children's learning progress without hard copy of the progress report. Edmodo permits the teacher assigning tasks & submitting assignments by the students in online, Students can write and submitting assignments online and the interface also allows the parents to know their students' learning progress with paperless environment.

With the background knowledge obtained from the preceding passages, the author of this paper has concluded that Edmodo a facebook for teachers of digital era.

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2. INFUSING A DOSE OF VIRTUAL LEARNING IN B.Ed. COURSE

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Abstract

National Council for Teacher Education (NCTE), New Delhi has increased the duration of B.Ed., and M.Ed., programmes two years in order to enhance the quality of teacher education in India. However, the teacher education is yet to change much in terms of teaching approaches and techniques even though digital technology ***permeates*** *the lives of students and teachers. Thus there is a need for a new paradigm of teacher education that calls for the integration of the digital technology with education which can open a new world of potential in teaching-learning process. Virtual learning is one of the digital technologies that can offer new vistas in teacher education. The present paper makes concise attempt to highlight the concept of virtual learning by covering the details like its forms, incorporation in B.Ed. course, advantages and disadvantages. At the end, the paper concludes about virtual learning with a caution.*

Key Words: *Virtual Learning, B.Ed. Course, Teacher Educators and Student-teachers*

Introduction

Teacher education refers to the policies and procedures designed to equip B.Ed. student-teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community. National Council for Teacher Education (NCTE), New Delhi has increased the duration of B.Ed., and M.Ed., programmes two years in order to enhance the quality of teacher education in India. However, the teacher education is yet to change much in terms of teaching approaches and techniques even though digitaltechnology permeates the lives of students and teachers. Thus there is a need for a new paradigm of teacher education that calls for the integration of the digital technology with education which can open a new world of potential in teaching-learning process. Virtual learning is one of the digital technologies that can offer new vistas in teacher education. It can make student-teachers get interested and expand their learning.

Meaning

Virtual learning allows every student to connect, interact, share and learn with others outside of their classroom and school using virtual conferencing tools such as **Polycom,** Adobe Connect, Microsoft **Lync** and Skype. It

can be synchronous, where all students log in at one time in a virtual classroom, or it can be asynchronous, where students access session recordings in their own time.

Virtual learning is capable of replacing partially or totally the teaching and learning functioning of a regular class room by adopting the advanced computer and ICT technologies like the internet, e-mail, online chatting, www, CD-ROM's, DVD's, teleconferencing and video conferencing.

Forms of Virtual Learning

Virtual learning comes in several forms:

1. Computer-Based

Instruction is not provided by a teacher; instead, instruction is provided by software installed on a local computer or server. This software can frequently customize the material to suit the specific needs of each student.

2. Internet-Based

This is similar to computer-based instruction, but in this case, the software that provides the instruction is delivered through the Web and stored on a remote server.

3. Remote Teacher Online

Instruction is provided by a teacher, but that teacher is not physically present with the student. Instead, the teacher interacts with the student via the Internet, through such media as online video, online forums, e-mail and instant messaging.

4. Blended Learning

This combines traditional face-to-face instruction, directed by a teacher, with computer-based, Internet-based or remote teacher online instruction. In effect, instruction comes from two sources: a traditional classroom teacher, and at least one of the forms of virtual learning described above.

5. Facilitated Virtual Learning

This is computer-based, Internet-based or remote teacher online instruction that is supplemented by a human "facilitator." This facilitator does not direct the student's instruction, but rather assists the student's learning process by providing tutoring or additional supervision. The facilitator may be present with the learner or communicating remotely via the Web or other forms of electronic communication.

Incorporating Virtual Learning in B.Ed. Course

B.Ed. institutions can take up initiatives to incorporate a dose of virtual learning in their traditional set up. Teacher educators can consider the option of virtual learning in some areas of teacher education which are given below:

1. Invited talks on multiculturalism, human rights, gender equality, transgender, learning disabilities etc.
2. Discussions on environment, climate change etc.
3. Workshops on teaching skills, innovative teaching strategies etc.
4. Video streaming of live classes of demonstration lessons etc.
5. Virtual visit to special schools, teacher education institutions of excellence etc.
6. Recordings of teaching sessions that can be viewed before a face-to-face session as a preparation activity or can be repeatedly viewed as a review activity.

Advantages

Virtual learning if incorporated in B.Ed. course can lead to a deeper understanding of the teaching and learning practices among teacher educators and student-teachers. Following are a few advantages of virtual learning:

1. Affordability and Accessibility

The virtual learning technologies tend to become affordable and accessible in the long run, even though expenditures need to be incurred in the beginning to install the facilities.

2. Provision for Access to Extended Curriculum

Virtual learning provides for wider range of curriculum covering the topics like Teaching skills, **technology, multiculturalism, gender equality etc.**

3. Access to Experts

Virtual learning helps the teacher education institutions to overcome the shortage of specialist/expert teacher educators. Thus, it provides platform for expert teacher educators to reach more students-teachers and also enable other teacher educators to learn from experts.

4. Economy

Virtual learning economizes the time of teacher educators and the cost of instruction.

5. Flexibility

Virtual learning provides instruction in a flexible manner to student-teachers without the constraints of time and location.

6. Networking

Virtual learning facilitates the networking of instruction among different teacher education colleges. Teacher educators and student-teachers can have access to a wide network of people and information.

7. Global Reach

Teacher educators and student-teachers can reach directly to other teacher educators and student-teachers who live in other places and countries. They can collaborate on projects and to look at topics that are relevant to them.

8. Advancing Professional Development

Teacher education institutions can see that engaging in virtual professional learning and development is to benefit both the institution and teacher educators – not only in the cost-saving from days off, teacher educator-release days, and travel, but also the benefit of continuity. Where the investment may have been made simply to get a one-day course, seminar, or workshop, now, teacher educators can have access to their professional development over many weeks or months, for a similar size investment. What's more, it connects them with other educators doing similar things that they are, and who are looking for ways to improve their

own professional activity and professional futures in that way.

9. Altering of Teaching and Learning Behaviour

Virtual learning requires that teacher educators and student-teachers should develop novel ways of teaching and learning. That means teacher educators have to take up blended teaching and **have to take** student-teachers.

10. Quick Access to New Developments

It is easier for teacher educators and student-teachers to upgrade themselves by adopting new concepts more quickly. It may take years for a traditional class to update the system. With virtual learning, student-teachers have the advantage to evolve quickly as they learn. New concepts and findings across the globe can be readily accessed quickly and conveniently.

Disadvantages

Virtual learning has some disadvantages which are given below:

1. Disconnect between Teacher Educator and Student-Teachers

Over use of virtual learning environments can cause disconnect between the teacher and students as they do not provide face-to-face interaction between them and thus, can deprive student-teachers of opportunities for better communication, personal warmth, counselling, guidance and deeper understanding of the concepts of teaching and learning.

2. Lack of Facilities

Facilities are still insufficient in teacher education institutions in rural areas.

3. Technical issues

Technical issues can interrupt the classes. Video/audio conferencing only effective with high **speed internets.**

4. Not Suitable for All Learners

Student-teachers requiring eye contact from the teacher educators to keep focus may find it hard to concentrate in virtual learning environment. In addition, some student-teachers prefer to listen to teacher educators and other student-teacher's discussions thus, the visual style of learning via virtual learning may not be effective for them.

Conclusion

Technology has become an indispensable part of the world we live in. It plays a greater role with every passing day. When technology is incorporated into the classroom, miraculous transformations can occur in the ways teacher educators teach and student-teachers learn. Although teacher educators most often still teaching, student-teachers are beginning to "own their learning," due to confluence of technology in their daily lives. It is high time that teacher educators can become facilitators when needed in order to facilitate the learning of student-teachers in the right directions. It is in this context that teacher education institutions and teacher educators can get inspired, develop imagination and flair to accommodate a dose of virtual learning environment within the ambit of B.Ed. course to reap certain unique teaching-learning advantages. However, one caution is that virtual learning cannot be and should not be used in every aspect of teacher education as it may lead to production of only knowledgeable teachers but not the teachers **with humanity**.

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3. PERCEPTION OF STUDENT TEACHERS TOWARDS BLENDED LEARNING PROGRAMME

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Abstract

Quality of teaching and learning will improve the quality of education. To improve the quality of teaching and learning, it is primarily important to improve the quality of teacher education. Therefore, this paper mainly focuses on innovative teaching method namely Blended Learning Programme and finding the perception of student teachers' towards Blended Learning Programme. Blended Learning

Programme is integration of both face-to-face and online learning. Blended Learning Programme was implemented to 29 student teachers from Pope John Paul II, College of Education (2014-2015). Research questions were framed to find the Perception of Blended Learning Programme was given to the same student teachers to know about their perception towards Blended Learning Programme. Miles Huberman's case study technique was employed for collecting and interpreting data ***in this method****. Miles Huberman's, (1984) case study technique was adopted to describe the findings of the qualitative study. Five open ended questions were given to the student-teachers to know how they have perceived about the Blended Learning Programme. The responses of the students were collected and analyzed. And the prominent answers of the students were listed out and given in the findings. The result of this study suggests that education stakeholders should adopt Blended Learning approach in teaching and learning process. This innovative integration of technology in teaching learning process will improve the quality and development of teachers.*

Keywords: *Blended Learning, Student teachers' perception, Innovation, Teaching and Learning, Technology Benefit.*

Introduction

The new developing trends in the community and education are interrelated. This new trend in the community decides what a child should learn, how to learn and who will bring these changes. These challenges can be faced by the education and educational institution to transfer changes because they reflect the need of the society. Teachers can carry these changes to attain quality education. National Policy on Education (1986) stated that "the status of the teachers reflects the social cultural ethos of a society it is said that no people can raise above the level of its teacher" therefore the strength of an educational system mostly depends on the quality of its teachers. Teachers are nurtured in the teacher education institution. Therefore, teacher education institutions are forced to use new trends in education. The new trends in education includes technology enabled learning. This paper mainly focusses on Blended Learning Programme which focus on technology enabled learning. Blended Learning is defined as a hybrid of classroom and online learning without the complete loss of face-to-face contact. This learning approach is flexible and integrates innovative and technological advances of online learning with active participation of students in conventional learning environment. The main focus of this paper is to find the perception of student teachers towards the innovative learning approach namely Blended Learning Programme.

Perception of Blended Learning

Students perception about their learning experience through Blended Learning Programme is assessed through various factors like interactivity, knowledge creation, content used, technology benefit and overall satisfaction about Blended Learning Programme through open ended research questions. Interactivity refers to students' perception of their interactivity, social interaction, belongingness and group dynamics during Blended Learning Programme. Students' perception of their learning activity during Blended Learning programme is referred as knowledge creation in learning environment. Students' perception towards the meaningful integration of technology in conventional classroom is referred as technology benefit in Blended Learning Programme and their satisfaction towards the program is termed as overall satisfaction. Therefore, perception refers to the experience gained in different methods of teaching and learning process. Riffell and Sibley (2003) studied student's perception of a hybrid learning and the results shows that students experienced more student- instructor interaction during the hybrid learning programme.

Statement of the Problem

In the present study researcher believed the importance of using Blended Learning Programme and students' perception towards Blended Learning in teaching learning process. Considering this the present study is titled as "**Perception of Student Teachers towards Blended Learning Programme"** was undertaken.

Objective

To qualitatively analyses the perception of student teachers towards Blended Learning Programme to improve the teaching and learning process.

Delimitations

The study is confined to student teachers (B.Ed. level) in Pondicherry and is conducted in Pope John Paul II College of Education. The units from teaching of physical science is alone taken for present study. Blended learning programme activities included sharing information through message board, emails, articles, uploading materials, mobile teaching, video conferencing and submission
of assignments in the platform. And activities like synchronous online tutoring was excluded.

Research Design

According to (Glene, 2006) qualitative research methods are a means of understanding a social phenomenon from the perspectives of those involved to contextualize issues in social, cultural or political environments or to transform or change social conditions. In this study the researcher used qualitative method to find the perception of student teachers on Blended Learning Programme. To achieve this, aim the researcher used research questions to collect data from the student teachers of experimental group. The following steps are used for collecting data in qualitative research method

Identifying Research question

Research questions are means of communication and gathering information about Blended Learning Programme from the participants. The answers collected from the research questions enabled the researcher to

understand the important issues related to the experience of learning in Blended Learning environment from the perspectives of learners.
The research questions framed for data collection was listed below.

Research Questions

1. In what way Blended learning program helps to improve achievement?
2. Does Blended Learning program improve the self-learning process?
3. Is the inclusion of online learning platform useful for learning?
4. Is technology really needed for teaching and learning process?
5. Does Blended Learning program strengthen the teaching learning process?

Participants

In the present study the researcher frames five research question to collect data from the participants. The research questions mainly focused on collecting information from the students based on the learning experience gained during their intervention period. Therefore, the student teachers from Pope John Paul II college of Education were exposed to qualitative research process. Research questions are used to collect data.

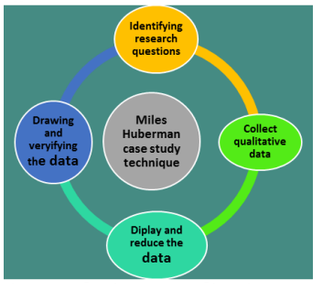
Data Analysis

In the present study Miles Huberman case study technique was employed for collecting and interpreting data in this method.
Miles Huberman, (1984) case study technique was adopted to describe the findings of the qualitative study. Five open ended questions were given to experimental group students in order to know how they have perceived the Blended Learning Programme. The responses of the students were collected and analyzed. And the prominent answers of the students were listed out and given in the findings. The investigator framed open ended research questions and given to the student teacher's. The data was collected from all the student teacher's and the results are displayed, from the results the frequent data was gathered and the remaining data are reduced. Conclusions are drawn from the frequently appeared data.

Steps followed in Miles Huberman case study technique

1. Data collection
2. Data display
3. Data reduction / condensation
4. Conclusions: drawing or verifying.

In this method the collected individual transcripts were read and re-read a number of times by the researcher followed by a writing process in which is a frequently occurred statements are gathered together and coded. The similar responses were grouped together and organized into themes and sub-themes or patterns. This study follows conventional content analysis were the coding was derived directly from the data.



In qualitative analysis generalization made in the research as that students' perspective toward Blended Learning Programme is improved after the treatment. The perspectives of students improved on the bases of online learning. Students are able to reflect and interact in the online learning platform. This is one of the significance of Blended Learning Programme where students are able to interact with the teacher and the peer group.

Findings

Research Question 1:

In qualitative analysis the students' responses where collected and gathered together and similar responses were presented as finding. "The innovative teaching strategy integrated in the conventional classroom is more useful and collaborative and interactive learning in the group has motivated me to improve my performance". (Reflection by the student Jayathilagam). Based on the reflection of the students the researcher arrived at following points as finding for research question 1.

1. In what way Blended learning program helps to improve achievement?

The academic achievement of the student teachers increased due to following reasons

a. Pre- planning by both teacher and student teachers for classes.
b. Continuous evaluation by teacher, students and peer group.
c. Sharing the best practices and participation of each member in group.
d. Innovative teaching strategies used during the teaching and learning process.
e. Collaborative and interactive process.
f. Immediate credits and progress shown in the platform motivated for higher achievement.

Research Question 2:

The student teachers understood that implementation of Blended Learning Programme has catered the need of the present generation learners. This result was supported by research question 2. In qualitative analysis for research question 2 the student's responses were collected and gathered together and similar responses were presented as qualitative finding. "The Blended learning programme satisfied my need and I learn myself in online learning

platform". (Reflection by the student Joan Fernandez). Self-learning is one of the main components of blended learning which was useful for the student community in experimental group. Based on the reflection of the students the researcher arrived at following points as finding for research question 2.

2. Does Blended Learning program improve the self-learning process?

Blended learning programme caters the needs of student with different learning styles in the class. It improves learning effectiveness, collaborative learning forums and coaching sessions with self-paced materials. Sometimes it overcome the real classroom limitations. If students fail to participate in face to face session since it is conducted in fixed time and location, in such situations virtual classroom events are recorded and extended to reach to the students who could not attend in a specific time. It improves the interaction with instructor, peers and higher quality mentoring experiences. And every individual become an active participant in the learning and collaboration process which keeps the students in track for learning.

Research Question 3:

In qualitative analysis for research question 3 the student responses were collected and gathered together and similar responses were presented as qualitative finding. "I am able to post video, text, photo and comments easily and interact with my friends, due to the security code and lock system". (Reflection by student Prachi Srivastava). This blended learning programme improves active engagement of student and teacher uploads many materials in the platform which helps student to learn by themselves. Based on the reflection of the students the researcher arrived at following points as finding for research question 3.

3. Is the inclusion of online learning platform useful for learning?

Inclusion of online learning platform for teaching and learning process improves the ability of the students to reflect as they interact with the learning materials. This process motivates and positively reinforces the learners. The cost effectiveness is maintained due to large number of free open source software. It enhances reliability performance and security over learning process due to availability of source code and lock system. In online learning platforms materials were easily stored, accessed and distributed (pdf, photo, video, audio recording, power point presentation link). This is more flexible that student can use whenever they need to use it. It is similar to Facebook which provides the potentials for improving student engagement in the classroom but more private and safe because it allows only teacher to create and manage group. Teacher can upload materials in the library, post assignment questions and fix date for submission and give immediate feedback.

Research Question 4:

In qualitative analysis for research question 4, the student responses were collected and gathered together and similar responses were presented as qualitative finding. "On online learning platform I am able to see the face to face classroom teaching even when I miss the classes, this helps me to reflect the concepts". (Reflection by student Mary Elizabeth). Student's reflection was also an important components of blended learning programme which was useful for the student community in experimental group. Based on the reflection of the students the researcher arrived at following points as finding for research question 4.

4. Is technology really needed for teaching and learning process?

Inclusion of technology in learning process makes the learner more individualized. Both learner and teacher reflect on their activities. Technology actively engage the learner during learning process and it acts as an assistant in performing tasks or solving problems with the assistance of teacher

Research Question 5:

In qualitative analysis for research question 5, the students' responses were collected and gathered together and similar responses were presented as qualitative finding. "This Blended learning programme provides learning rich environment with different methods like brain storming, discussion, power point presentation and video presentation all satisfied my need and I learn with maximum interest". (Reflection by student Rekha). Social interaction and cost effectiveness was one of the main components of blended learning which was useful for the student community in experimental group. Based on the reflection of the students the researcher arrived at following points as finding for research question 5.

5. Does Blended Learning program strengthen the teaching learning process?

Blended Learning Program strengthens the aspects such as pedagogical richness, access to knowledge, social interaction, personal agency and cost effectiveness. This method provides learner satisfaction, interaction and socialization during teaching learning process. This method maintains the balance between innovation and production. The simple blended learning is the thoughtful integration of classroom face to face experience with online learning experience.

Discussion

Qualitative research is mainly aimed at investigating the perception about Blended Learning Programme to the student- teachers. Five research questions were used to investigate how participants showed their perception towards Blended Learning Programme. The responses were collected from all the students. The collected data was displayed and most frequently occurred answers are suggested for the effective use of Blended Learning Programme. The results revealed that, the implementation of Blended Learning Programme has improved their learning performance. This method suggests, sharing the best teaching

practices and participation of each member in the group. It increased collaborative and interactive process. The result of the study close relation with Hyo-Jeong So, Thomas A. Brash, (2007) who studied student perception of collaborative learning, social presence and overall satisfaction in Blended Learning environment. Data was collected using students' perception questionnaire and face-to-face interviews. The result of this study showed that student who perceived high level of collaborative learning is more satisfied. Interview data collected through qualitative analysis revealed that learning activities in collaborative learning method provide opportunities for all the classmates to work. The problem based task helped the students to find the relevance and meaningfulness of their learning. From the related study it is understood that active engagement of the student is possible in Blended Learning Programme.

Conclusion

The generalization made in this research shows that student's perspectives toward Blended Learning Programme is improved after the treatment. The perspectives of students improved on the bases of online learning. Students are able to reflect and interact in the online learning platform. This is one of the significance of Blended Learning Programme where students are able to interact with the teacher and the peer group. Therefore, the qualitative result supports the use of Blended Learning Programme. This implies that blended learning programme at any level should promote collaborative work, giving the trainees a sense of how teaching can be performed in interaction with fellow trainees and teachers and the other is acquisition of fundamental teaching skills requires cognitive effort rather than the support of well-designed online resources. And many findings suggest that blended learning programme will only be successful whenever it is based on a pedagogical concept.

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4. ROLE OF TECHNOLOGY IN EDUCATION

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Abstract

There is an emerging broad consensus around the world about the benefits that can be brought to education system through the appropriate use of evolving information and communication technologies. The range of possible benefits pervaded practically all areas of activity in which knowledge and communication play a vital role. It is involved from improved teaching and learning processes to better student outcome, increased student engagement and seamless communication with teachers and parents. Today there is a significant gap between knowledge and skills students learn in school and the knowledge and skills that workers need in workplaces and communities. Employers report that they need students who are professional, having good moral and work ethics, can collaboratively work in team, have critical thinking and problem solving ability, can lead a group of people and are skilled in verbal and written communication. It also enhances the relationship between teacher and student. When technology is effectively integrated into subject areas, teachers grow into roles of advisor, content expert, and coach. Technology makes teaching and learning more meaningful and fun. ***Keywords****: Education Technology, e-Learning,*

Introduction

The role of technology, in a traditional school setting, is to facilitate, **through increased efficiency and effectiveness, the education of knowledge** and skills. Efficiency will be defined as the quickness by which we obtain knowledge, while the term effectiveness is associated with the amount of imparted knowledge that is operationally mastered. When technology is directly applied to an educational setting, such as a school, both the students and teachers can be viewed as learners. Thus, we can operate under the assumption that any increase in teacher knowledge and utilization has the impact of increased learning in students. Ultimately, technology should serve to increase student achievement in schools. **Significance of it in Education**

Access to Variety of Learning Resources

In the era of technology, IT aids given plenty of resources to enhance the teaching skills and learning ability. With the

help of IT now, it is easy to provide audio visual education. The learning resources are being widens and widening. Now with this vivid and vast technique as part of the IT curriculum, learners are encouraged to regard computers as tools to be used in all aspects of their studies. In particular, they need to make use of the new multimedia technologies to communicate ideas, describe projects, and order information in their work.

Any Time Learning

Now in the year of computers and web networks, the pace of imparting knowledge is very fast and one can be educated. One can study whenever he wills irrespective of whether it is day or night and irrespective of being in India or in US because of the boon in IT.

Collaborative Learning

Now IT has made it easy to study as well as teach in groups or in clusters. With online we can be uniting together to do the desired task. Efficient postal systems, the telephone (fixed and mobile), and various recordings and playback systems based on computer technology all have a part to play in educational broadcasting in the new millennium. The internet and its web sites are now familiar to children in developed countries and among educational elites elsewhere, but it remains a little significance to many more, who lack the most basic means for substance.

Multimedia Approach to Education

Audio-visual education, planning, preparation and use of devices and materials involve sight, sound, or both for educational purposes. Among the devices used are still and motion pictures, filmstrips, television, transparencies, audiotapes, records, teaching machines, computers and video discs. The growth of audio-visual education has reflected developments in both technology and learning theory.

Authentic and up to Date Information

The information and data which are available on the **net is purely correct and up** to date. Internet, a collection of computer networks that operate to common standards and enable the computers and the programs they run to communicate directly provides true and correct information.

Online Library

Internets support thousands of different kinds of operational and experimental services, one of which is online library. We can get plenty of data on this online library. As part of the IT curriculum, learners are encouraged to regard computers as tools to be used in all aspects of their studies. In particular, they need to make use of the new multimedia technologies to communicate ideas, describe projects and order information in their work. This requires them to select the medium best suited to conveying their message to structure information in a hierarchical manner and to link together information to produce a multi -dimensional document.

Distance Learning

Distance Learning a method of learning at a distance rather than in a classroom. Late 20th -century communication technologies, in their most recent phases multimedia and interactive, open up new possibilities, both individual and institutional, for an unprecedented expansion of home-based learning, much of it part-time. The term ‘distance learning’ was coined within the context of a continuing communication revolution, largely replacing a hitherto confusing mixed nomenclature—home study, independent study, external study and most common though restricted in pedagogic means correspondence study. The convergence of increased demand for access to educational facilities and innovative communications technology has been increasingly exploited in face of criticisms **that** distance learning **is an** inadequate substitute for learning alongside others in formal institutions. A powerful incentive has been reduced **costs per** student. At the same time, students studying at home themselves save on travel time and other costs.

Better Accesses to Children with Disabilities

Information technology has brought drastic changes in the life of disabled children. IT provides various software and technique to educate these poor people. Unless provided early with special training, people profoundly deaf from birth are incapable of learning to speak. Deafness from birth causes severe sensory deprivation, which can seriously affect a person's intellectual capacity or ability to learn. A child who sustains a hearing loss early in life may lack the language stimulation experienced by children who can hear. The critical period for neurological plasticity is up to age seven. Failure of acoustic sensory input during this period results in failure of formation of synaptic connections and possibly, an irremediable situation for the child. A delay in learning language may cause a deaf in child's academic progress to be slower than that of hearing children.

Conclusion

Technology also changes the **way teachers** teach, offering educators effective ways to reach different types of learners and assess student understanding through multiple means. It also enhances the relationship between teacher and student. When technology is effectively integrated into subject areas, teachers grow into roles of advisor, content expert and coach. Technology makes teaching and learning more meaningful and fun.

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5. TECHNOLOGY AND TEACHING: FINDING A BALANCE

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Abstract

Technology, in one form or another has always been part of the teaching and learning environment. It is a part of the teacher's professional toolbox. In other words, it is among the resources that teachers use to help facilitate student learning. Technology has changed dramatically over recent decades. The contemporary curriculum guides teachers to facilitate the development of adaptable and flexible learners who know how to take new tasks and situations, quickly and easily. Students will need to be good communicators who can competently discuss topics with others and effectively share their ideas in many forms and for different purposes. A child is not born with knowledge of digital technology, but can learn through the parent, a program, a friend or a teacher that a child learns to use technology. Students are seeing, using and trying media in all aspects of their lives outside of the school context. Teachers can help students draw links between what is happening outside the school and what is happening inside the school.

Keywords: *digital technology, student learning.*

Introduction

Technology, is one form or another, has always been part of the teaching and learning environment. It is part of the teacher's professional toolbox. In other words, it is among the resources that teachers use to help facilitate student learning. Technology has changed dramatically over recent decades. The increasing variety and accessibility of technology has expanded the toolbox and the opportunities teachers have to use technology. Computer devices are more powerful and come in different forms, from those that sit on our desks to those that sit in the palm of our hands. The internet connects those devices and connects students to each other in the classroom, through the school and around the world.

The Role of Technology in Education

Learning with technology has become essential in today's schools. Worldwide, governments, education systems, researchers, school leaders, teachers and parents consider technology to be a critical part of a child's education. It is acknowledged that advances in technology have an influence on the way people create, share, use and develop information in society, and that young people need to be highly skilled in their use of information and communications technologies (ICT). Developing students' knowledge and skills related to ICT in the school years provides an important grounding for later in life. It also provides equity of opportunity, regardless of background. General social commentary and the popular press tend to generalize about young people, their access to and use of technology. Recent literature has challenged these assumptions and acknowledges that, although students today may have been born into a technologically rich world, they may not be avid and skillful users of technology.

Learning with Technological Tools

The contemporary curriculum guides teachers to facilitate the development of adaptable and flexible learners who know how to take on new tasks and situations, quickly and easily. Students will need to be good communicators who can competently discuss topics with others and effectively share their ideas in many forms and for different purposes. Students will need to possess excellent collaboration skills and be able to work together with many different types of People, each of whom has her or his own special disciplines and unique ways of learning and working together.

Digital Learning Resources

Digital learning resources support information processing by helping students to develop mental representations through the mix of media elements presented to them. Digital learning resources include content and, sometimes, learning activities. They combine multimedia elements including text, image, video and audio to present information. Research on multimedia learning have demonstrated more positive outcomes for students who learn from resources that effectively combine words and pictures, rather than those that include words alone. Students attention and engagement with these resources helps them to process the information into working memory. When students meaningfully interact with the multimedia information, they encode this information into their long-term memory. This meaningful interaction might involve learning activities within the digital resource itself and/or as a lesson that is created by the teacher.

Using Technology to Communicate

A child is not born with knowledge of digital technology, but can learn to become one. It is through a parent, a program, a friend or a teacher that a child learns to use technology. Students are seeing, using and trying media in all aspects of their lives outside of the school context. Teachers can help students draw links between what is happening outside the school and what is happening inside the school. Teachers can use technology within the classroom to model real-world practices. Meaning-making occurs when students communicate using multimodal texts. The Australian Curriculum for English explains that multimodal texts 'combine language with other means of communication such as visual images, soundtrack or spoken word, as in film or computer presentation media'.

Creating with Technology

As 21st-century learners, students are expected to be able to create a multitude of products in the school environment. The creation of new ideas can be exemplified through stories,

maps, projects, games, journals and much more. Curriculum documents have changed to address the increasing demands of the technological world that we live in; they also hold steadfast to fundamental values for learning.

Challenges and Barriers

This has presented the opportunities for using technological tools in teaching and learning. However, it is true that not all teachers are embedding technology into their teaching. A significant body of research has investigated why this occurs. The barriers to use technology in the classroom are many and include, among others, resource limitations, teacher knowledge and skills, and teacher attitudes and beliefs. Teachers are faced with challenges and barriers all the time. Technology's place in society causes teachers to consider the implications for them in their role as educator and as lifelong learners themselves. The constant challenge for teachers is to draw upon their continually developing knowledge and skills about what to teach and how to teach. Technology is just one, but an important consideration in that equation.

Conclusion

We cannot prepare students with the skills they need without making comprehensive use of technology throughout every aspect of education, just as other industry sectors have been doing for years. Technology has a fundamental role to play in creating a 21st century education system. What will it take to maximize the impact of technology? It will take a clear vision of a 21st century education and an understanding of technology's role. It will require reliable and equitable access to technology and planned ongoing investments. And it will require substantive and meaningful professional development for educators.

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6. LEARNING AND TEACHING IN THE DIGITAL WORLD

Dr. R. JAYAKUMAR, Assistant Professor, Vivekananda College for Education, Puducherry
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Abstract

There are some applications of technology helping the students to learn better and to develop the capacity of social constructive and connectives learning process. The e-learning, Collaborative online learning enhances the fact learning. The independent work on the part of the learners given by the digital class room, the teachers are frequently accessed electronically and the lecture-style of transmission of learning eliminated, and classrooms become group of activity, exploration, application, discussion, reflection and collaboration. There is no doubt that technology has helped to facilitate this and to widen the possibilities for teaching learning and connection. At the same time, it has created new problems around issues of accessibility, safety and accountability.

Key words: *Social Constructivism, Connectivism and e-learning curriculum*

Introduction

Now a day, teaching and learning in conventional method is being outdated in many countries by the updated digital world which could enhance the teaching and learning process better and to give the virtual experience to the learner to learn and practice the learnt content. The digital technology plays its major role in developing and implementing the curricula for learners in the modernizing and intellectually stuffed world. Curricula development and implementation by digital technology in many countries have created STEAM (i.e.) they have given importance to Science, Technology, Engineering, Arts-language, visual and performing and Mathematics. Catch an, (2013) then added his points towards the importance of implementing creativity. He trusted that creativity will bring innovation in all its form.

Pedagogical Learning Theories

Learning is recursive process and involves creating, reading, analysing, practicing and improving contents consistently. Correspondingly, a number of learning theories and pedagogies already exist and they have proven their effectiveness and impact in various contexts. It has been a widely-accepted fact that specific learning pedagogy must be followed to have effective outcome based learning. Social constructivist and connectives theory provides the strong basis to form the cloud-based convenient and collaborative online learning environment (Bindley et al., 2009).

Social Constructivist Theory

Human beings learn easily and conveniently in a social environment (Krista et al., 2009). Social constructivist theory is based on development of human beings through social interaction. It follows a learner cantered model that the students learn more in social environment while collaborating with their friends and teachers. This statement is supported by the theory of 'Zone of proximal development' (ZPD) given by Russian psychologist Vygotsky (Chaiklin, 2003).

During learning process, teachers gain valuable insights of students learning and their understanding. This will assist them to analyse and measure the learning capability of students and can find out the various methods to improve learning. The interaction and participation in social environment engage students in their working. Students participate, contribute and share their ideas, while constructing their own knowledge during social collaboration. Collaboration and interaction among students lead to better knowledge exchange and effective learner participation that enhance the learning outcome. Teachers are responsible for assisting students during knowledge construction. The teachers can design learning activities that makes them engaged and can be easily grasped. Learning becomes more effective by rethinking and refining process during working with collaboration.

Connectivism Theory

According to Connectivist, it is a new learning theory to develop existing learning theories based application to a networked world (Duke et al., 2013). Connectivism explains the use of internet world and associated technology for sharing and learning information (Downes, 2010). According to the connectives theory, learning can happen online across networks where teacher and students can interact online. Teachers can guide and share information with students to support their learning online. Students are motivated and encouraged to explore information using online resources in connectivist theory. Connectivism helps to form connected community in online mode to share information. Siemens proposed the theory of connectives for the changing environment in digital era. Siemens recognized the impact of technology on society, where people communicate and learn with each other. Connectivism provides a premise framework that is very useful for understanding collaborative environment in online learning process (Siemens, 2005). According to him, learning in the digital age relies on the connected learning that occurs through interaction with various sources of knowledge and participation in social networks. Hence, connectivism provides the basis of connecting individuals with each other by using technology.

The learner community in such environment shares the similar learning goals. During learning process the students will collaborate and interact with each other that lead to a better exchange of knowledge (Kumar & Sharma, 2016). This will increase learner participation and improves instructional outcomes. Considering the learning theories, it is established that the collaborative environment should be a learner-centered model. The learner centered model will facilitate the construction of knowledge by social interaction and participation of learners.

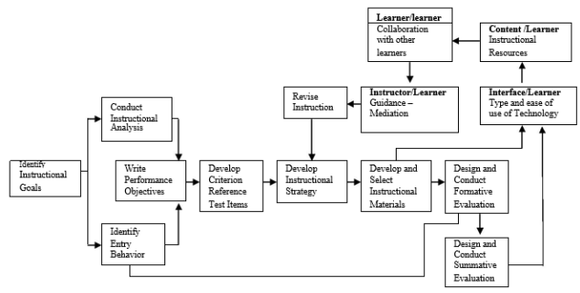

Figure-1. **Dick and Carey model adapted by author to e-learning curriculum.**

Enter in to these steps come at two different areas. The curriculum designer can enter the steps during the design and select phase of the process so that they can ensure the instructional materials fit for the criteria of e-learning module or they can enter after the evaluation phase of the program to evaluate the effects of the e-learning module.

The order of design through these steps relate to a hierarchy believed to be important by the author to the design of e-learning model. The technology should be first because of access issues and continual change of resources. If the technology is the most up to date, a learner may have entry problems into all aspects of the learning environment. Adversely, if the technology is antiquated the training may not be as interesting or interactive as necessary to provide the needed training.

Secondly, the content must work with the technology and be appropriate to the knowledge needed for the students learning. Content also changes fast in some fields so content must be examined from both the use of it though e-technology and the learning that will take place.

Third important one is the learner-to-learner interface. Learners must have multiple communication sources and the learners to be motivated to communicate among themselves. One of the most important aspects of learning is the sharing of ideas among peers. This aspect is often overlooked in the e-learning environment and should be an important part of the design process.

Fourth, is the instructor-learner interaction. Most e-learning programs have a system for instructor communication. This interaction must be easy with immediate feedback. Delay in communication and feedback in a timely manner, frustrated and disinterested in the process. Interface interaction could be assessed through e-learner satisfaction analysis based on surveys designed for responses pertaining to online features and ease of use of pilot programs (Gunawardena, Carabajal, & Lowe, 2001). E-learning programs can have tools built into the system to measure the time an e-learner uses the system and how many areas or features are used by each e-learner. Content

assessment is an ongoing process and should be analyzed against the learning objectives for clarification.

E-learner or collaboration interaction evaluation can be built into the e-learning program to track time spent in chat rooms and responses to discussion topics. Collaboration can also be assessed with surveys geared toward perceived interaction during training. Instructor interaction can also be built into the system by tracking e-mails, instructor lead chat room attendance and participation and instructor lead discussion topics. By doing these evaluations, the curriculum designer can re-evaluate the instruction, make changes and start the development process over to refine the e-learning product.

Conclusions

The model presented in this paper is a combination of ideas from several authors and although not proven as a collaborative effort, the individual projects of each author have been tested and proved to be of use in the development of curriculum for educational purposes. This combination of models to design a model that would meet the criteria for the needs of a typical e-learning student. The model needs to be tested and further research performed to ensure the model will perform as stated. Electronic education will see many changes in both equipment and software, and educators must be ready to utilize these innovations to train future learners in the most effective and time efficient methods to keep up with the demand for a highly trained workforce. The learners can resolve the social problem in collaborative environment by utilizing their experience of learning. The students will put their coordinated efforts with active participation for solving the problems with constructive Ideas. The problems are solved effectively by incorporating feedback in social learning environment. The information from the feedback procedure provides the basis of goal directed action to the learners.

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7. A FRAMEWORK: CLOUD COMPUTING CURRICULUM DESIGN

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Abstract

In this paper, we provide an overview of a design of a course on cloud computing and candidate content of this course. Cloud computing is a set of pooled computing resources delivered over the Internet. The cloud delivers a hosting environment that does not limit an application to a specific set of resources. Depending on the platform, an application can scale dynamically and increase its share of resources on-the-fly. The cloud can quickly scale to thousands of servers to make resources available as they are needed. The goal of this curriculum development effort is to train our students in a technological area that is state-of-the-art which has high demand for personnel skilled in the same. The proposed curriculum will incorporate fundamental aspects of cloud computing that will invigorate the current and future students and set a path towards establishment of a string of new courses around this area: lower power design of large scale systems, efficient computer architecture, materials engineering, efficient resource sharing, computer networks and cyber security to name a few. We also provide an overview of various projects that could be performed using OpenStack, open source cloud "operating system" software, as a learning platform for cloud Infrastructure as a Service (IaaS). The proposed course is intended for any course students. ***Key words:*** *Cloud Computing, Curriculum development design*

Introduction

The goal of this curriculum development effort is to train our students in a technological area that is state-of-the-art which has high demand for personnel skilled in the same. The proposed curriculum will incorporate fundamental aspects of cloud computing that will invigorate the current and future students and set a path towards establishment of a string of new courses around this area: lower power design of large scale systems, efficient computer architecture, materials engineering, efficient resource sharing, computer networks and cyber security to name a few. While the traditional computer science and electrical/computer engineering departments have courses around these themes, the cloud technological context completely changes the ball game. Further, there is scope for integrating courses from

other departments, possibly from other colleges. For example, effective infrastructure planning (college of architecture) is an important requirement for cloud. Clearly, there is an opportunity for establishing a major concentration area within computer science and electrical and/or computer engineering departments. In the proposed curriculum, the students will be introduced to salient aspects of cloud computing using OpenStack, an open source platform for cloud computing. Students will build, configure, manage and run a small-scale cloud computing platform from scratch.

Cloud Computing Curriculum Design - Framework

In this section, we provide an overview of our experience in designing a cloud computing curriculum at the University of Texas at San Antonio. We hope that by sharing our experience, instructors at other universities can adapt the content to their specific needs or improve upon the content and thereby proceed towards a mature curriculum on cloud computing in academia. Since the cloud computing industry has grown rapidly, it is critical that academia is able to train the next generation of workforce with knowledge in this area.

The detailed architecture of layered approach is presented to gain the settings in learning environment.

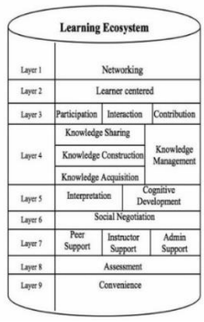

Figure 1. Cloud computing based collaborative and convenient learning framework

Layer 1 - Networking Layer

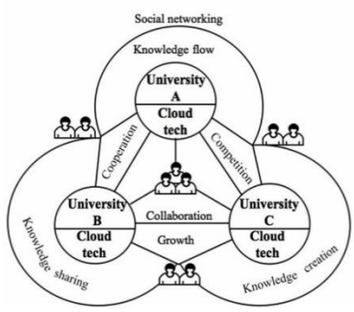

Figure 2. Networking Layer

Figure 2 shows the broader view of networking layer in cloud computing based online collaborative and convenient learning framework. This layer can be framed using social context by identifying three components 1) university network enables social networking using collaboration with various universities connected on cloud technologies 2) students network can be built using inter-organizational culture where students can collaborate and share their knowledge from diverse resources 3) growth of individual stakeholders (student and teachers) will be supported by cooperation, coordination and competition among the social networking community. This approach will deliver optimize use of resources among cross-university networking culture

Layer 2 - Learner Centered Layer

The learner centered layer as shown in Figure 3 comprises of four elements 1) 24 X 7 support of learning content delivery enables student access to learning resources at any time 2) heterogeneous computing platforms enables students to learn their contents from any computing device 3) mobility will supports to access learning modules from any place and at their own pace 4) personalization of content enables students to view and learn according to their choice, where the students find the learning matter at their ease of learning. Such type of learner centered environment will be important for high learning outcome with greater conceptual understanding with good class attendance, improved critical thinking skills with collaborative learning and improved teamwork.

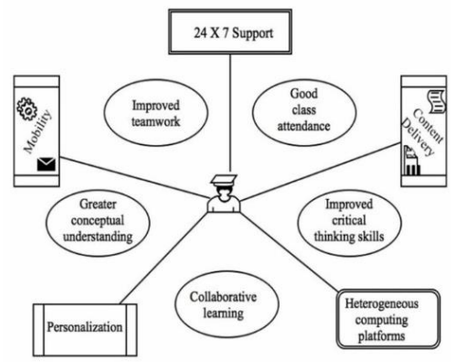

Figure 3. Learner- Centered Layer

Layer 3 - Participation, Interaction and Contribution Layer

Participation, interaction and contribution layer as shown in Figure 4 comprises of two elements 1) participation, interaction and contribution enables students to participate, interact and contribute their inputs and ideas in the learning objects which lead to confidence building 2) group or collaborative learning enables problem solving with co-creation of knowledge among students and new content is produced that is helpful for learning.

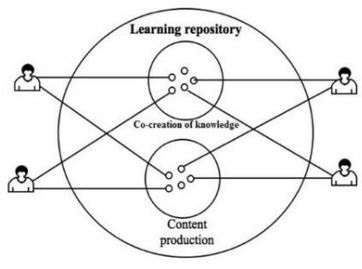

Figure 4. Participation, Interaction and Contribution Layer

Layer 4 - Knowledge Management Layer

In the knowledge management architectural layer, a broad view of various components and relationships is shown in Figure 5. It consists of five components 1) different stakeholders (students, teachers and administrator) tasks 2) learning management system 3) content repository of learning (such as learning objects and other knowledge resources access) 4) mentoring and monitoring support provided by teachers and administrator 5) collaboration systems for students to do discussions and forums. This layer will contribute the reusable objects and knowledge contribution, sharing and acquisition in the learning ecosystem that will benefits the entire users.

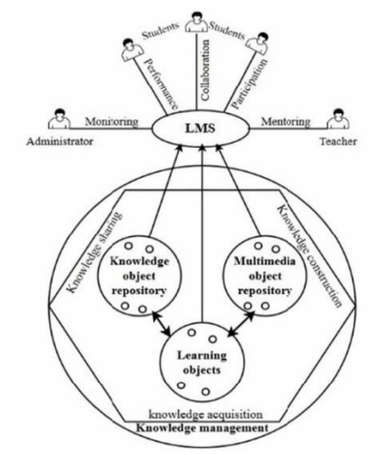

Figure 5. Knowledge Management Layer

Layer 5 - Interpretation and Cognitive Development Layer

In Figure 6 the detailed interpretation and cognitive development layer is shown. This layer comprises of three elements 1) learning content taxonomy enables the students to access the learning resources created by the teacher or other external learning digital resources 2) assessment and evaluation assists students to analyze and improve their work 3) gaining of knowledge with right meaning and understanding leads to cognitive development. This layer will support students to progress during learning process.

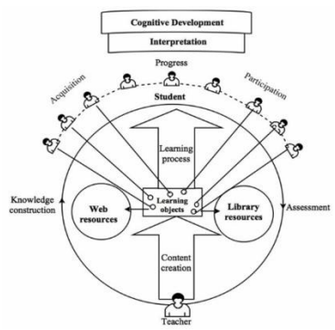

Figure 6. Interpretation and Cognitive Development Layer

Layer 6 - Social Negotiation Layer

In Figure 7 social negotiation architectural layer is shown that comprises of two elements 1) collaborative activity on project or assignment enables students for social negotiation in their group work by sharing understanding on a common problem 2) better knowledge exchange among students is gained during evaluation and social negotiation. The students find themselves engaged, motivated and gaining deep learning during social negotiation process in the group project or assignment.

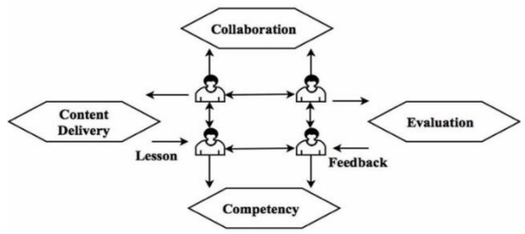

Figure 7. Social Negotiation Layer

Layer 7 - Peer, Instructor and Admin Support Layer

In Figure 8, detailed architecture of peer, admin and teacher support is shown consisting 3 elements:

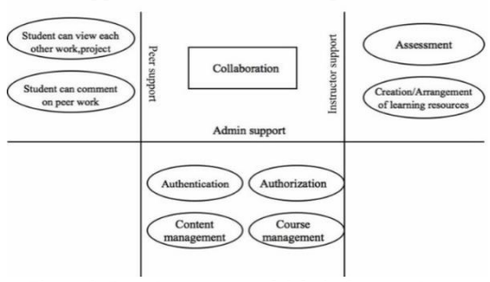

Figure 8. Peer, Instructor and Admin Support Layer

1) peer support enables students to analyze each other work and can suggest comments to their work for improvement; 2) instructor support assists to create and arrange learning contents and other informative resources for the students along with feedback to enhance learning; 3) admin support enables the administrators to authenticate and authorize the students and teachers along with providing course and content management.

Layer 8 - Assessment Layer

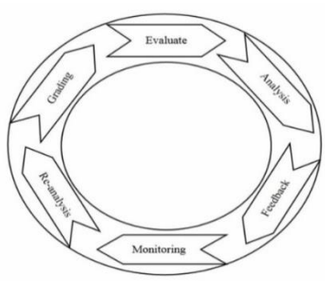

Figure 9. Assessment Layer

The detailed architecture of assessment layer has been depicted in Figure 9. This layer consists of five elements 1) evaluate and analysis enables the teachers to analyses the student's projects or assignment 2) feedback enables the teachers to delivers the improvement work carried by the students 3) monitoring assists teachers to keep track for the improvement work carried by the students 4) re-analysis assists teachers to recheck the improved version of the work 5) grading supports to give the performance based marking to the students.

Layer 9 - Convenience Layer

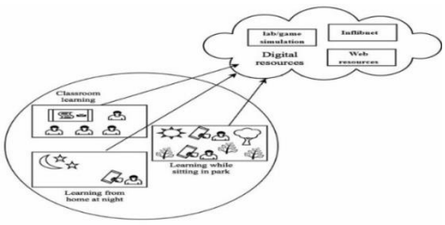

Figure 10. Convenience Layer

In Figure 10 the detailed architecture of convenience layer is shown that comprises of two components independent learning from any place and time enables ease of learning to the students at their own pace 2) availability of learning resources at all-time enables students to experiment simulation lab games or practical's and use other learning resources. This layer will support, motivate and engage students in learning completely in fun way.

Conclusions

The main challenge lies in how to find the best available cloud computing related technologies that align with course objectives and fit well into other components of the course. The cloud computing based platform will be highly scalable and will help the institutions in reducing the financial burden of new technology adoption. On the other hand, the pedagogical approach will help them to deploy technology in accordance with the proven teaching approach. The framework facilitates collaboration among students and teachers to reshape the teaching and learning environment with interaction, participation and engagement. Our Indian education system also may keep up cloud-based collaborative and convenient learning framework in the institutions will be able to support the constructive learning goals in a more logical and technology driven mode.

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8. 21st CENTURY TECHNOLOGICAL TOOLS FOR TEACHING AND LEARNING

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Abstract

Information and communication technologies (ICT) have become common place entities in all aspects of life. Across the past twenty years, the use of ICT has fundamentally transformed the practices and procedures of nearly all forms of exertion within business and governance. Education is a very socially focused activity and quality education has traditionally been connected with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centred learning settings. But with the world moving swiftly into digital media and information, the role of ICT in education is becoming more and more essential and this importance will continue to grow and develop in the 21st century. In this paper, we elaborate what is Edmodo, Blogs and Google Forms and how does a teacher can make use of it in the teaching and learning process.

Introduction

Digital Era is also known as 'Information Age' or 'New Media Age'. Digital Era helps to create a knowledge based society surrounded by high technology which helps individuals to explore their personal needs. In the present scenario, Digital Technologies play a key role in the teaching

and learning process. The rapid technological developments have helped the teacher to achieve professional development. Technology has the power to transform the teaching learning process. Technologies, nowadays are helping the teachers to use the educational resources and other Technologies that can increase educational productivity by accelerating the rate of learning and better using teacher's time. Technologies help the teacher to collaborate, share their ideas and resources with the help of various digital tools. These technological tools help both the teacher and students to get access to the various resources, materials for effective teaching and learning.

Concept of Learning

Learning is a process that occurs within nebulous environments of shifting core elements not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more and more important than our current state of knowing.

Concept of Teaching

In much modern usage, the words 'teaching' and 'teacher' are wrapped up with schooling and schools. One way of approaching the question 'What is teaching?' is to look at what those called 'teachers' do – and then to draw out key qualities or activities that set them apart from others. The problem is that all sorts of things are bundled together in job descriptions or roles that may have little to do with what we can sensibly call teaching. Another way is to head for dictionaries and search for both the historical meanings of the term and how it is used in everyday language. This brings us to definitions like: Impart knowledge to or instruct (someone) as to how to do something; or Cause (someone) to learn or understand something by example or experience.

Role of ICT in Education

As Digital Era is also known as Information Era, it helps to get information in every aspects of education. As NCF (2005) says ICTs should be an important tool for teaching, the advancement of science corners, and providing access to science experimentation kits and laboratories. ICTs play a key role for bridging social gaps. ICT should be used in such a way that it becomes an opportunity equalizer by providing information, communication and computing resources in all educational setup as well as the remote areas. ICTs help to link children and teachers with scientists working in universities and research institutions. It would also help in demystifying scientists and their work.

An educational institution executes a significant function of providing learning experiences to lead their students from the darkness of ignorance to the light of knowledge. The key personnel in the institutions who play a vital role to bring about this transformation are teachers. As stated by NCTE (1998) in Quality Concerns in Secondary Teacher Education, the teacher is the most important element in any educational program. It is the teacher who is mainly responsible for implementation of the educational process at any stage. This shows that it is imperative to invest in the preparation of teachers, so that the future of a nation is secure. The importance of competent teachers to the nation 's school system can in no way be overemphasized. The National Curriculum Framework (NCF) 2005 says about different demands and expectations of the teacher, which need to be addressed both by initial and continuing teacher education. The importance of competent teachers to the nation's school system can in no way be overemphasized. It is well known that the quality and extent of learner achievement are determined primarily by teacher competence, sensitivity and teacher motivation. It is common knowledge too that the academic and professional standards of teachers constitute a critical component of the essential learning conditions for achieving the educational goals. Teacher education encompasses teaching skills, sound pedagogical theory and professional skills.

Teacher Education = Teaching Skills + Pedagogical theory + Professional skills

Teaching skills would include giving training and practice in the different techniques, approaches and strategies that would support the teachers to plan and impart instruction, provide suitable reinforcement and conduct effective assessment. It includes effective classroom management skills, preparation and use of instructional materials and communication skills.

Pedagogical theory includes the philosophical, sociological and psychological considerations that would empower the teachers to have a sound basis for practicing the teaching skills in the classroom. The theory is stage specific and is based on the needs and requirements that are characteristic of that stage.

Professional skills comprise the techniques, strategies and approaches that would help teachers to grow in the profession and also work towards the growth of the profession. It includes soft skills, counselling skills, interpersonal skills, computer skills, information retrieving and management skills and above all lifelong learning skills.

Concept of competence based Teacher Education

In the present day of globalization, technical innovations, information and communication technology are everyday developments. Knowledge of today is outdated tomorrow and so the concept of lifelong learning is of at most importance. A teacher must be competent enough to deal with the students and fulfil the desire of learning of the learners. Whereas the competence concerns of the National Council of Teacher Education (NCTE) has identified ten teacher competencies for making the teachers professionally content. Teacher Competencies have been categorized on the basis of purpose.

These are as follow:

Contextual competencies, conceptual competencies, content related competencies, transactional competencies, educational activities associated competency, competencies to develop teaching learning material,

evaluation competencies, management competencies, competencies related to working with parents and competencies associated to working with community and other agencies.

The Competency Based Curriculum for Teacher Education, 1998 clearly displays the importance given to the teacher specific pedagogical competence. There is hardly any reference to technological skills requirement on the part of a teacher. But National Curriculum for Teacher Education, 2010 has emphasized ICT as an essential component in teacher education and this reflects the challenges the teacher and the students have to face in this information era.

Teacher education needs to orient and sensitize the teachers to differentiate between critically useful, developmentally suitable and the detrimental use of ICT. In a way, ICT can be imaginatively pinched upon for professional development and academic support of the pre-service and in-service teachers (NCFTE,2010). It also opines that Teaching is a profession and teacher education is a process of professional preparation of teachers. Teachers are concerned, in an important way, with the total development of human beings – physical, intellectual, emotional, social, moral and spiritual. While the dimensions of teaching other than the informational and cognitive may have suffered neglect in modern times due to a variety of factors, one cannot deny that they constitute an integral part of the teachers' role and functions. The implication of this is to give due emphasis to developing reflective teachers with positive attitudes, values and perspective, along with skills for the craft of teaching.

The implementation of this framework has come in reality as Two Year Teacher Education programmes both for under graduation and post-graduation. The B.Ed. course has a paper titled, 'Critical Understanding of ICT'. This course focuses on moving beyond computer literacy and ICT- aided learning, to help student-teachers interpret and adapt ICTs in line with educational aims and principles. It explores ICTs along with three broad stands; I) teaching- learning administration ii) academic support system iii) broader implication for society.

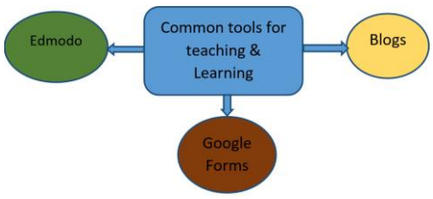
In view of ICTs as an important curricular resource and an integral part of education, according primacy to the role of the teacher, ensuring public ownership of digital resources created and used in education, taking a critical perspective on ICTs as well as promoting constructivist approaches that privilege participation and co- creation over mere access, are principles that the course help teachers explore. Applying these principles can support Teacher Professional Development models that are self-directed, decentralized and collaborative and peer learning based, and continuous, in line with the NCFTE, 2010 vision for teacher education.

A paper titled, 'Advanced Educational Technology' is prescribed for M.Ed. with the following objectives:

- Know the nature & scope of educational technology and also about the various forms of technology
- Become effective user of technology in Education
- Know the instructional design and modes of development of self-learning material
- Understand the system approach to education, communication theories and modes of communication

The above details explicitly explain the significance of knowledge in skills in ICT application in teaching and learning at all stages of education. ICT in the field of education provides easy access to learning. The utility of ICT is multifaceted as students can now browse through e-books, sample examination papers, previous year papers etc. and can also have an easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world. This flexibility has heightened the availability of just-in-time learning and provided learning opportunities for many more learners who previously were constrained by other commitments. The available resources of ICT can foster better teaching. ICT also allows the academic institutions to reach disadvantaged groups and new international educational markets. Today learning is possible at any time and teachers are also finding the capabilities of teaching at any time. Mobile technologies and seamless communications technologies support teaching and learning. Choosing how much time will be used within the envelope and what periods of time are challenges that will face the educators of the future.

Common technological tools for Teaching and Learning:



Edmodo is a free and secure teaching platform where teachers and students both need to have account. It is more over like Facebook and twitter but it can be controlled by teacher accordingly. It helps the teacher to create and manage communication in a registered group. Edmodo facilitates a virtual and collaborative classroom. By using Edmodo, teacher and students can share content and submit assignments, homework and quizzes and also helps to get feedback from the teacher. Edmodo assists teachers to setup and manage their online class very easily. Hence Edmodo has unlimited option in terms of sharing digital contents and thus find and share within a broad stream of content and conversation related to the topic. It is commonly thought of as the Facebook of schools. Edmodo can be incorporated into classrooms through a variety of applications. Current uses include posting assignments, where they could be sorted for example by either who did not turn in their assignment or graded and not graded. It is also good for creating polls for student responses with the advantage of instant feedback.

Edmodo allows the students to upload assignments for their teachers to view and grade. Students who are normally shy in the classroom, can take advantage of

Edmodo and use it to speak privately with the teacher. Parent can also do an account which will allow them to see their children's assignments and grades. Teachers can also send alerts to parents about school events, missed assignments, and other important notices through Edmodo.

Benefits of Edmodo

- Learning is learner-centered
- Learning is synchronous or asynchronous
- Chat: allows students to increase the frequency and quality of communication, which leads to opportunities to increase their confidence and motivation (Al-Kathiri, 2014)
- Continuous access to classroom resources to access course documents, videos, images, assignments, assessments
- Facilitates the development of language skills: reading, writing, spelling and grammar, sharing, vocabulary, listening (Al-Kathiri, 2014)
- Edmodocon: online conferences with thousands of attendees
- Benefits shy students who struggle with face-to-face communication with teachers and classmates (Balasubramanian, 2014, p.418)
- Collaborative affordances parallel those of scientists in the real world (Wendt & Rockinson-Szapkiw, 2014, p. 1104)
- Online discussions provide students with "time to reflect upon the learned concepts and other student's ideas because immediate response is not required as in the face-to-face classroom discussion" (Wendt & Rockinson-Szapkiw, 2014, p. 1106)

Blogs and Wikis: Blog is an abbreviated version of "weblog," which is a term used to describe websites that maintain an ongoing chronicle of information. A blog features diary-type commentary and links to articles on other websites, usually presented as a list of entries in reverse chronological order. Blogs range from the personal to the political, and can focus on one narrow subject or a whole range of subjects.

Conclusion

According to OECD, 2009 the future requirement is 21st century skills and competencies. It believes that the current century will demand a very different set of skills from people which includes communication skills and technological skills. And this is the focus of all the policies and programmes education system in India. The technological development of today provides e- platforms for effective teaching, learning and evaluation. Edmodo, Google Form and Blogs writing are of such platforms, can be utilized in a flexible manner for student centric learning. There are no doubt learners of today can be tuned to these platforms and decently effective and the country will see very efficient future citizens.

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9. LEARNING AND TEACHING IN DIGITAL WORLD

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Abstract

*The purpose of this paper is to summarize "**the learning and teaching method of Education in digital world"**. Basically teaching must include two major components sending and receiving information and also imparting knowledge to the students. Ultimately, a teacher*

tries his best to impart knowledge as the way he understood it. So, any digitized communication methods that serve this purpose without destroying the objective could be considered as best methods of teaching. Digital learning refers to the process of learning with the aid of digital content, platform or facilitators. The future of learning would see an increased use of digital components in classrooms and make the students to understand easily. The use of learning and teaching methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the human development goal for the country. The various methods of learning and teaching through digital world are discussed.

Introduction

Digital learning refers to the process of learning with the aid of digital content, platform or facilitators. The future of learning would see an increased use of digital components increasingly as more content becomes available, the comfort and willingness of the players in the learning ecosystem changes along with their mindset and pedagogy evolves to leverage the value proposition of digital learning.

Objectives of Digitized Learning and Teaching

- To make the process of teaching and learning an enjoyable and non- monotonous process
- To bring about the aspect of student involvement and making class more interactive
- To use of Visual and audio aids with Emphasis on thinking rather than just learning
- To Increase the preparedness of Teachers
- To make students work in collaborative and competitive fashion

Parallel processes take place in a digitized learning and teaching

1. Students become more active, reflective learners.
2. Students and teachers engage in learning through the use of technology and become more familiar with technology by using it.

Facilitator of Learning

- A facilitator is the person who assists a group of people in grasping at their common targets and in achieving them without any intervention on his/her behalf.
- Facilitator in a classroom means being a successful teacher. This means that one builds constructionist classes where there are mutual positive and active responses from the teacher and the learners

Various Methods for Learning and Teaching in Digital World

The present education system is facing substantial pressure to prepare the students to learn, live and working the digital age. Technology is becoming a powerful tool for communication, problem solving, and as a means of research for learning in education area. Information technology has helped learners to develop problem –solving, analytical, and research skills.

1. Electronic learning
2. Virtual Classrooms
3. ICT (Information and communication technology)
4. Multimedia Learning Process
5. Online Education

Electronic Learning

E-learning or learning through computer technology, is fast becoming an extremely versatile solution of providing learning with the tools necessary to address needs of students in order to provide good and standardized education. Students can interact with the e-learning software enjoying such as colorful presentations, play games and answer quiz questions etc., Students and teachers both gain considerable benefits by utilizing e-learning tools.

E-learning includes

- Computer Based Training (CBT)
- Web -Based Training (WBT).

Computer based training

- CBT is the training where a computer program provides motivation and feedback in place of a live instructor.
- It can be delivered through CD-ROM, LAN or INTERNET.

Web based training:

- WBT is the training, which delivers educational content through a web browser over the public internet, or a private internet.
- Web based training often provides links to other learning resources
  Such as references, e-mail, bulletin boards, and discussion groups.

Virtual Class Rooms

The new technology helps captive the student's interest. It is interactivity involves a student with software that reacts and interacts, unlike a book. Thus, students can get immediate feedback on their actions, be it a quiz answer or a request for more information.

Using the virtual learning for student can:

- Search the database for their views.
- Listen to pre-recorded audio comments to enhance knowledge.
- Use appropriate resources to seek access and apply knowledge.

Information and Communication Technology: (ICT)

Rapid developments in Information and Communication Technology (ICT) have made it an important part of our daily lives, from staying in contact with people, to checking traffic and booking tickets. ICT can also be a useful tool for teachers in advancing 21st century learning.

Multimedia Learning Process:

Multimedia, is the combination of various digital media types such as text, images, audio and video, into an integrated multi-sensory interactive application or presentation to convey information to an audience. Currently, many institutions are moving towards problem-based learning as a solution to producing graduates who are creative and can think critically, analytically, and solve problems. Creating multimedia projects is both challenging and exciting. Fortunately, there are many multimedia technologies that are available for developers to create these innovative and interactive multimedia applications. These technologies include Adobe Photoshop and Premier to create edit graphics and video files respectively, Sound Forge and 3D Studio Max to create and/or edit sound and animation files, respectively.

Online Education

Two approaches of online learning,

- Synchronous learning
- Asynchronous learning.

Synchronous Learning

Synchronous learning is instruction and collaboration in “real time” via the Internet. It typically involves tools, such as:

- Live chat
- Audio and video conferencing
- Data and application sharing
- Shared whiteboard
- Virtual "hand rising"
- Joint viewing of multimedia presentations and online slide shows

Asynchronous Learning

Asynchronous learning methods use the time-delayed capabilities of the Internet. It typically involves tools, such as:

- E-mail
- Threaded discussion
- Newsgroups and bulletin boards
- File attachments

Conclusion

Nowadays, all schools will have access to the technology available to provide high quality, high capacity, ultrafast internet access for teaching and learning. Connected classrooms offer today’s students and teachers easier, affordable, and faster access to information, teaching and learning resources, peers, experts and the wider community. Schools are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number of educational tools and resources and subject-matter experts over the internet. Teachers are using online networks and social media to connect with other schools and peers who can help them adapt their teaching practices to make the most of digital tools. Students are using digital technologies to connect with other students across the country and across the world, and to engage in self-directed learning in areas of personal interest and expertise. Many of us use technology to connect to information and learning whenever and wherever we choose

10. DIGITALIZING TEACHING AND LEARNING

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Abstract

Digital learning is any type of learning that is facilitated by technology or by instructional practice that makes effective use of technology. Digital learning occurs across all learning areas and domains. It encompasses the application of a wide spectrum of practices. In recent years reference to ‘digital technology in the classroom’ (DTC) can be taken to mean digital processing systems that encourage active learning, knowledge construction, inquiry, and exploration on the part of the learners, and which allow for remote communication as well as data sharing to take place between teachers and/or learners in different physical classroom locations. This is an expanded notion of technologies that recognizes their development from mere information delivery systems and also clarifies their role in classrooms in contrast to their wider use across schools and learning centers. This paper is an attempt to suggest a few measures of optimizing DTC in the Schools and thereby enhancing the teaching and learning process.

Introduction

Digital learning is any type of learning that is facilitated by technology or by instructional practice that makes effective use of technology. Digital learning occurs across all learning areas and domains. It encompasses the application of a wide spectrum of practices including

- Blended and virtual learning.
- Game-based learning
- accessing digital content
- collaborating locally and globally

- Assessment and reporting online
- Active participation in online communities
- using technology to connect, collaborate, curate and create.

Digital technologies are everywhere and they're bringing many exciting opportunities for our schools, impacting what, where and how education is delivered. Our Schools are gradually moving towards the mode of complete digitalization

- Schools are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number of educational tools and resources and subject-matter experts over the internet.
- Teachers are using online networks and social media to connect with other schools and peers who can help them adapt their teaching practices to make the most of digital tools.
- Students are using digital technologies to connect with other students across the country and across the world and to engage in self-directed learning in areas of personal interest and expertise.
- Parents and families are forming stronger connections with schools using digital services like social networks, websites and online surveys.
- Many of us use technology to connect to information and learning whenever and wherever we choose.

In recent years reference to 'digital technology in the classroom' (DTC) can be taken to mean digital processing systems that encourage active learning, knowledge construction, inquiry, and exploration on the part of the learners, and which allow for remote communication as well as data sharing to take place between teachers and/or learners in different physical classroom locations. This is an expanded notion of technologies that recognizes their development from mere information delivery systems and also clarifies their role in classrooms in contrast to their wider use across schools and learning centers. Some of the ways of Optimizing DTC is suggested below

Interactive Whiteboards (IWB) allow images from a computer to be displayed through a digital projector, onto a large (usually wall-mounted) board. Users can interact with the content on the board using fingers or a stylus.

Digi Pubs - classroom ideas: Digi Pubs provide classroom ideas, advice and digital resources to support the teaching of all subjects like math's, English, history science etc.

SAMR model

The SAMR model, developed by Dr. Ruben Puentedura, describes technology integration through four levels.

- Substitution – technology is used as a direct substitute for what one might do already, with no functional change.
- Augmentation – technology is a direct substitute, but there is functional improvement over what one did without the technology.
- Modification – technology allows one to significantly redesign the task.
- Redefinition – technology allows one to do what was previously not possible.

TPACK framework

Technological Pedagogical Content Knowledge (TPACK) is a framework that identifies the knowledge teachers need to teach effectively with technology. At the heart of the TPACK framework, is the complex interplay of three primary forms of knowledge: Content (CK), Pedagogy (PK), and Technology (TK). Personal Learning Network (PLN**)** a PLN is an individual's loose collection of links with other people or resources. The aim of such a network is to facilitate an exchange of ideas that supports learning links can be through, for example: online interest groups for example on Twitter and/or online and face-to-face courses access to a wide range of perspectives and expertise beyond the confines of the physical institution data security and confidentiality accuracy of information access to the network lack of teacher understanding/ training Virtual Learning Environment (VLE) a VLE is an e-learning education system that is web-based, but modelled on conventional face-to-face education. It provides access to courses, course content, assessments, homework, links to external resources etc.,

Software Applications (Apps) are designed to operate on mobile devices such as smartphones and tablet computers. for example, Podcasts, blogs, wikis, RSS (Rich Site Summary – used for updating regularly changing web content), social networking and tagging.

Potential Benefits of Digital Technology in the Class room

The potential benefits of DTC are that

1. DTC can foster dialogic and emancipatory practice. - Dialogic practice is that in which students are active, engaged and empowered participants in a conversation from which learning emerges. For example, learners working on a math modelling programme can start to have conversations about what they see on a computer screen without having to rely on terminology that they may not yet have (look at 'that', what happens if you do 'this'?) The teacher can then add the appropriate language into the conversation as the project develops.
2. Emancipatory practice is that in which an individual student's ideas go beyond the learning prescribed by the teacher/syllabus as they draw on knowledge gained outside formal education to construct understanding. For example, in music lessons learners can use their own knowledge and expertise of playing instruments or using technology to construct their own recording environments (perhaps using their mobile phone). They can then bring in ideas that they have created at home or in instrumental music lessons.

3. Different technologies can improve learning by augmenting and connecting learning activities. For example, in a geography lesson two classes in different schools may link up via the internet to explore cultural differences in relation to a particular global issue such as pollution or energy supply. The groups could work together to understand not just the issue itself but its impact on communities and individuals by talking to real people. In situations where bandwidth is limited this could be done at a whole class level via video or even over email or SMS (Short Message Service) messaging.
4. Digital technology can often also be exciting for learners and offers a potentially more engaging alternative. At the same time, it is important to be aware that some learners may be less confident in learning with digital technologies and steps need to be taken to ensure equality of access.
5. Digital technology offers immediate feedback for both the learner and the teacher.

How can schools support the use of digital technologies in the classroom?

1. Schools can allow teachers and learners the freedom to explore potential new uses of devices and systems as well as combinations of technologies into novel digital environments. For example: – Raspberry Pi is one way to encourage teachers and learners to create technological solutions to problem based tasks (see www.raspberrypi.org). –
2. The Scratch programming interface is a further way of encouraging learners to create their own environments and has been used to develop understanding in a wide range of subjects (see scratch.mit.edu). This will help to foster the effective dialogue and emancipatory practice that is a component of deeper critical understanding.
3. Teachers and learners should be encouraged to share their practice with each other in the classroom and more widely. How can teachers support the use of digital technologies in the classroom?
4. Teachers can make the best use of technology in the classroom by developing their awareness of a range of digital technologies and considering carefully both how and why they can be used to support students' learning. Effective selection of software and devices is only part of the story. The consideration of what learning will be achieved and how the technology may help is fundamental to its effective deployment.
5. The SAMR (Substitution, Augmentation, Modification, Redefinition) model developed by Dr. Ruben Puentedura is a useful reference when considering the implementation of technology in the classroom. Substitution Instead of producing a handwritten report, learner types the report using a word processor. Technology acts as a direct tool substitute, with no functional change Augmentation Teacher adds comments electronically then emails the report back to learner. Transformation Technology acts as a direct tool substitute, with function improvement Modification Learner loads report onto a blog. Other learners view and add comments. Technology allows for significant task redesign Redefinition Instead of written report, learner produces online response including images, audio and video.

What are the challenges/criticisms of digital technologies in the classroom?

Apart from all the benefits DTC provides, few challenges also need to be mentioned.

Teachers and schools need to think carefully about when, why and how to use technologies as well as evaluating their efficiency and effectiveness.

1. There is a 'digital divide' - the divide between those who have access to digital technology and the internet, and those that do not.
2. Implementing and then maintaining technology is costly particularly as systems can quickly become out of date.
3. There may be problems with the existing infrastructure, for example internet connections may be inconsistent and/or slow.
4. Safety for students and teachers is a key challenge with prevention of cyber-bullying, the hacking of personal information, access to illegal or banned materials and distractions from learning (such as social networking and mobile phone use) all being high on institutional agendas.

Some uses of technologies can be harmful. For example, poor posture and eyestrain are common problems when working at desktop computers for prolonged periods. Also Repetitive Strain Injury (RSI) is a risk that occurs from the repeated actions necessary to control mobile devices

11. IMPORTANCE OF THE E-LEARNING AND THE NECESSARY FOR THE DEVELOPMENT OF THE STUDENTS HOW THEY DIFFERENTLY FEEL THE CHALK AND TALK AND MONITERED CLASS

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Abstract

For teachers and instructors, they can learn from this study that the web-enhanced teaching "is no longer an add-on feature in teaching but a necessity" as stated in the research. What can still be missing in online learning and teaching is the interactivity and communication offered in class-based lessons. As stated in the study "undergraduates who are more likely to rely on interactive learning may suffer

from web-based teaching that often lacks interactive communications."

Today, the use of web to teach and learn is inevitable for both teachers and students. Online courses are becoming more and more necessary for education to and for knowledge spread. Thus, teachers should consider this trend in education and get prepared technically and pedagogically to take online teaching in consideration. In turn, students need to get enough skills that will help them effectively benefit from the advantages of e-learning is providing.

Today, e-learning is adopted not only by students, but also by organizations that want to offer training for their employees. E-learning is a priority for businesses that look forward to improve employee's skills and the economic benefits they can generate from that. That's why online learning has become an important factor for both, education and business.

Key Words: - learning, education, classroom, chalk and talk

Introduction

Technological development and the internet have changed people's lives on different scales including for instance teaching and learning. The web has become one of the channels of learning that opens the door for people around the world to access education for free, or for fewer costs.

The IT booming and the internet have opened the door to largely access knowledge, high quality education and training. This easy access using information systems and the web can improve people's skills for fewer costs. Knowledge delivering to some people would have never been possible without the opportunities offered by technology and the web.

A recently published study has highlighted the importance and effectiveness of e-learning and how students are satisfied with web-enhanced teaching. For that purpose, researchers collected data through surveys "for a total of 45 undergraduate and 26 graduate students enrolled in landscape construction studio courses at Texas A&M University during 2011 and 2012."

To understand the issue, researchers made comparison with another study that previously conducted in 2003–04. "They evaluated students' learning satisfaction and the effectiveness of e-learning in landscape architecture construction studio courses, compared trends in learning vehicles preferred by graduate and undergraduate students, and examined preferred learning vehicles between students expecting an A grade and those expecting a B or C grade."

The study results indicated that "students were highly satisfied with web-enhanced teaching in both investigations. Particularly, students in recent years were more satisfied with web-enhanced teaching than those in the past. Undergraduate and graduate students preferred different types of learning vehicles, in which undergraduates preferred interactive types. In addition, students expecting an A grade were more likely to prefer individual or independent learning vehicles whereas students expecting a B or C grade relied on interactive learning methods."

Objectives

- To shed light on the concept of E-learning
- To focus on the characteristics of E-learning
- To compare the advantages of E-learning
- To compare the disadvantages of E-learning
- To judge the similarities and differences between E-learning and chalk and talk.

Five benefits of E - learning

There are 5 key benefits in which e learning has transformed the landscape of learning and development. When compared to the traditional mode of classroom learning, there is clear evidence that e learning brings:

- What learners want - really
- Faster delivery
- Lower costs
- More effective learning
- Lower environmental impact.

Quality of E- Learning:

E-learning has a unique feature of arranging an access to unlimited number of students the same quality of the content that a fulltime student has.

- **Useful medium**: E-learning can prove an effective media and tool for facing the problem so lack of trained teachers, shortage of schools and needed facilities for providing quality education to the number of students residing in far and wide corners of the country.
- **Special wisdom styles**: Unlike traditional classroom education, E-learning can cater to different learning styles and promote collaboration among students from different localities, cultures, regions, states and countries.
- **Suppleness**: The flexibility of E-learning in terms of delivery media (like CD, DVD, Laptops and Mobile Phones), type of courses and access may prove very beneficial for the learners.
- **Play-way guts and learning by responsibility**: Learning experiences via simulated and gaming techniques may also provide the advantages of getting richer experiences on the useful pedagogical footings of play-way spirit and learning by doing or leaving.
- **Attractive and Encouraging**: E-learning may make the students more interested and motivated towards learning as they may get a wide variety of learning experiences by having an access to multimedia.
- **On-line, Off-line and survive communication**: The opportunities of having an on-line, off-line and live interaction between the students and teachers and among the students themselves may make the task of E-learning a joy and best alternative to the lively face-to-face interaction and real time sharing of the experiences in a traditional classroom setting

Be deficient in tools

Most of our schools are not at all ready, willing and equipped for making use of E learning in the proper interest of the teachers and students. Leaving aside a small number of self-financing public schools meant for children of rich parents, most of the schools in our country cannot even imagine for venturing in the area of E-learning.

- **Expensive**: E-learning is costlier than traditional education. E-learning tools are very expensive. Their repair is also very expensive. Hence, E-learning is beyond the rich of most of the students. They do not have resources for purchasing electronic equipment.
- **Sensation of seclusion and misplaced public Contact**: The feeling of isolation experienced by the users of e-learning is one of the main defects quite visible in any system of distance learning including E-learning. There is no face-to-face interaction and humanistic touch profoundly available in the traditional class room setup. Moreover, the lack of social participation and community sharing experiences may prove handicap to the students of E-learning in their adequate physical, emotional and social development.
- **Lack of stipulation for trainer instruction programme**: There is lack of provision of equipping the teachers in their pre-service or in-service programmes for getting acquainted with the knowledge and skills required on their part for the use of E-learning at their work places. As a result, the teachers neither have any inclination towards E-learning nor have any competence for its organization in the school or providing guidance to their students in its use.
- **Depressing position**: An overall attitude of the learners, teachers, parents, educational authorities and society is usually found negative towards the processes and products of E-learning. E-learning is adjusted as second rate in comparison to regular classroom teaching.
- **Unpleasant effect on strength**: E-learning adversely affects the eyesight and some other parts of the body. The learners become physically inactive. Sometimes they become victims of physical diseases.
- **Technological deficiency**: E-learning is based on technology. When technical defect occurs, E-learning stops. As a result, continuity of learning is broken and there is no progress in E-learning.

The Teaching Style Then (Past Trends)

Language teaching has evolved over the centuries. Earlier the language was taught as a subject rather than developing a skill. The methods used then ignored the development of oral proficiency of the learners. To name a few of the methods that were a part of learning processes in the past include:

- Grammar-Translation Method
- Bilingual Method
- Direct Method
- Audio-Lingual Method
- Structural Approach
- Communicative Language Training

Teachers have been in constant search of more effective and better ways of teaching language.

Chalk and Talk Technology

The primary goal is to improve student's learning an effective one. The wish is to use technology to enhance the traditional chalk and talk lecture, not to replace it specifically, the wish to improve the quality of the lecture and the quality of the notes taken by the students during the lecture with the coming of technology. As students learn more during the lecture and take better quality notes, they will be more productive during their homework and study time if it is improved with an appropriate technology.

The preparation time for lecture method is approximately the same as for a traditional chalk and talk lecture. Teacher can create the file, print one copy, and develop the lecture notes in approximately the same amount of time as developing traditional chalk and talk lecture notes on blank paper.

Everyone knows how to surf the web and use a word processor, so there is no new software that must be learned to use this lecture process. The classroom must have a projector that is mounted in the ceiling and shines on the board and a computer installed in the classroom that is networked so that the faculty member can use the technology conveniently

Technology has become available in the last few years that makes it much easier to prepare the lecture notes. The teacher is able to spend more time with students during class and less time writing and drawing on the board. The students are able to spend more time thinking and less time on writing. In the end the teacher can feel they are providing a better learning experience to their students

Disadvantage of Chalk and Talk

'Chalk and talk' teaching method is not enough. It is said the teachers should not exclusively rely on this method to engage the students says an officer from the Ministry of Education. "Teachers who use the chalk and talk method need to use more teaching aids that can inspire student's interests in learning and also assist students in concept formation, consulting counselor at the ministry, Secondary School. He said the teacher should not only depend on the lecture method but also use the two-way communication in the classroom scenario. He also says some students are quick learners and takes time to acquire the simplest topic thus the teacher should make sure that the students are actively participating and all range of students are getting engaged in class. And also emphasized that teaching methods should be child-centered and two-way communication a must. More activity-based approaches and class participation between

the teacher and students should be adopted. "When students are actively involved in a particular lesson, learning becomes more interesting and meaningful"

Conclusion

The efforts of teachers and technology combined to improve the quality of education and learning attempts to emphasize a number of advantages. Though the use of e-learning is growing in language teaching, there are still certain drawbacks attached to it. Advancement in E-learning extends further possibilities of learning going beyond traditional way of teaching.

E-learning and chalk and talk will encourage both teachers and students to take personal responsibility for their own learning. When teachers succeed it builds self-knowledge and self confidence in them. The recent trend in E-learning sector is screen casting. E- learning and chalk and talk will also bring a substantial change in the method of spreading knowledge to improve the quality in teacher education and hence will make teachers of global standard. Thus, these are beneficial to education, corporations and to all types of teachers / learners.

It is the effective learning process created by combining digitally delivered content with learning support and service. Therefore, we can conclude that teachers need to acquire technological skills in order to succeed in E-learning. Chalk and talk is also used in learning purpose. It is an historian method of education and the educational approach which provides learning opportunities to the students through the face to face activities and easy learning of the subject and the expressions too.

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12. EDUCATION IN THE DIGITAL WORLD

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Abstract:

The present educational system is now witnessing a paradigm shift from the traditional chalk and board teaching methodology to digitalizing the pedagogical approach through technical devices. Such an information would not only increase the capability of the teachers but would also widen the knowledge base of students. The rapid advances in ICT in recent years have resulted in an extensive search for possible uses of ICT in educational settings. Many educators all around the world are now taking innovative steps to integrate technology into their teaching environments. They are left with innumerable choices to cater to the needs of the 21st century classrooms.

Key words: *ICT, teacher, student, education, curriculum.*

Introduction

This Digital Strategy for Schools sets out the vision of the Department of Education and Skills to embed Information and Communication Technologies (ICT) in teaching, learning and assessment in Irish primary and post-primary schools in the period 2015-2020.

The Programme for Government (2011-2016) commits to integrate ICT more deeply into the education system. The Strategy maps out how this commitment can be realized and the ways in which ICT can be used by schools to broaden and enhance teaching, learning and assessment practices.

This Strategy endorses the definition of ICT as "a diverse set of technological tools and resources used to communicate and to create, disseminate, store and manage

information". While this Strategy acknowledges the emergence of newer terms such as digital technologies, digital learning tools, digital devices and digital learning so the term ICT is used throughout this document.

Educational Reform

With the development of the Strategy, the Department is looking to integrate ICT more deeply into the Irish education system over the next five years. Under the Government reform agenda for the public services, ICT is viewed as having a central role in the provision of better and more effective services. Research (such as Kozma 2008) recommends that, where possible ICT integration should be associated with a wider educational reform programme similar to that which is currently underway in Ireland.

There is a broad reform programme currently underway within the Department, which impacts institutional, policy and operational levels in education. The enactment of the Teaching Council Act 2014 and subsequent related legislation heralded a new era for the teaching profession in terms of standards and regulation. Initial teacher education programmes have been reconfigured and modernized and work is underway on the development of a continuing professional development framework for teachers which will outline standards and expectations.

Reform is also underway on what is taught in our schools.

The Concept of ICT Integration

To bring this vision to life, the Department is committed to integrating ICT across the system through a process of 'ICT integration'. The concept of ICT integration is regularly used in national strategies and policies, however it is rarely defined. All too often it is assumed that simply the presence of ICT (i.e. computers, broadband etc.) in a school will organically lead to ICT integration (Lim and Khine, 2006; OECD, 2015). However, it is now recognized that the integration of ICT into teaching, learning and assessment is a complex and challenging process

The concept of effective ICT integration goes well beyond the introduction of ICT into schools and needs to be considered within the wider context of school-improvement with issues such as:

- Education change
- School leadership
- Professional development and support
- Evaluation systems and

Sharing of professional practice with other teachers and schools (Tondeur, Braak and Valcke, 2008).

In essence, to benefit from the full impact of ICT integration, ICT should be embedded into the school culture. This often entails redesigning "educational infrastructure, teacher training [approaches], curriculum structures and materials, classroom practices and modes of assessment"

ICT in National Education

The Irish Government appreciates the need to prepare our young people for this evolving world. This understanding is reflected in the ICT Skills Action Plan, a joint initiative between the Department of Education and Skills and the Department of Jobs, Enterprise and Innovation. The National Digital Strategy (NDS) published by the Department of Communications, Energy and Natural Resources (DCENR, 2013) is a further step in helping Ireland to reap the full rewards of a digitally-enabled society. The NDS is one part of the overall Government commitment to create a more digitally-empowered society and education system, which involves a suite of complementary national and regional measures.

There has also been a focus on the role of ICT in the Higher Education (HE) sector with the establishment of the National Forum on the Enhancement of Teaching and Learning in Higher Education. The Forum has placed a major emphasis on building digital capacity within the HE Sector and has recently published a digital roadmap for institutions to assist them integrate ICT more deeply into their practice. This Strategy, like the afore mentioned Governmental policy approaches, strives to enhance the quality of our education system.

Students

- Using ICT to open up new forms of learning and collaboration to support different styles of learning.
- Experiencing joy, satisfaction, passion and success in their education and lifelong learning.
- Actively engaged in learning – both in and out of school.
- Accepting ownership of their learning – involving the ability to be self-directed, a decision-maker and a manager of priorities in and out of school.
- Using technology to achieve personal learning goals and to succeed in various learning activities (Adapted from McGinn, 2007).
- Using ICT critically and ethically.

Teachers

- Taking a more facilitative role, providing student-centred guidance and feedback, and engaging more frequently in exploratory and team-building activities with students.
- Using ICT to "support an enquiry process and enable their students to work on solving complex real-world problems" by engaging in "collaborative project-based learning activities that go beyond the classroom" (Butler et al., 2013; p.8).
- Supporting students to create and innovate so that they are engaged in managing their own learning goals and activities.
- Accepting ownership of their own professional learning and where appropriate, designing and participating in learning communities that make extensive use of technology.

Schools

- Taking a lead role in planning how they will effectively embed ICT in teaching, learning and assessment practices. This means involving the entire school community in developing an e-Learning plan that takes into account the CPD needs

of teachers and the views and insights of students and parents/guardians.

- Developing policies and practices for the safe and ethical use of ICT by all members of the school community.
- Strengthening their existing relationships with the wider community both local and global, and in particular, connecting more with parents/guardians and students in their homes through the use of digital technology.

Parents/Guardians

- Engage with their children's learning through the use of digital technologies.
- Collaborate with and participate in school activities and programmes using ICT.

Curriculum

- All future curricula will include clear statements that focus on the development of digital learning skills and the use of ICT as a resource in achieving specific outcomes across the curriculum.
- Curriculum specifications will support in-depth study of ICT and specialized application of ICT tools as appropriate.

Benefits of Emerging Technologies for Education:

- Education is scalable, since educational institutions do not have to build classrooms and infrastructure to hold face-to-face classes. To accommodate more learners, educational institutions need only expand the network and hire more instructors to facilitate additional courses.
- Electronic learning materials are easy to update. Because learners use their mobile devices to access the learning materials from a central server, they can receive these updates as soon as they are made.
- The same learning materials can be accessed by students from different regions and countries. Learners can complete their education from any location as long as they have access to the learning materials, possibly through a wireless connection.
- Because learners can access the learning materials anytime, they can select the time they learn best to complete their coursework. This increases the success rate in learning and facilitates informal learning.
- Designers of learning materials for emerging technologies can leverage the computing power of the technology to personalize the learning experience for individual learners.
- Since learning with emerging technologies is learner focused, learners will be more involved with their learning, and thus motivated to achieve higher level learning.
- For businesses, mobile learning can be integrated into everyday work processes which promotes immediate application. The emerging technologies allow workers to access learning materials for just-in-time training.
- Because most learners already have mobile technology, educational institutions can design and deliver courses for different types of mobile technology (Ally & Lin, 2005).

Conclusion

We have seen many unsuccessful results in the history of education despite investing so much on equipping language learning environments with highly advanced technological devices in the expectation of success. The key to successful use of technology in teaching lies not in hardware or software but in "Human ware" – our human capacity as teachers to plan, design and implement effective educational activity. Technology can only become effective and useful in education and also teaching and learning environments in hands of competent teachers**.**

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13. REFLECTIVE PRACTICES IN DIGITAL SCENARIO

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Abstract

Teaching and learning is a complex whole. Learning is the act of acquiring new, or modifying and reinforcing, existing knowledge, behaviours, skills, values, or preferences and may involve synthesizing different types of information. So teaching should not be pouring-in and pouring-out process but it should provide real experience in learner. Reflective practices give effective learning experience among the learners and teachers. Reflective learning is a way, allowing learners to develop critical thinking skills and improve on future performance by

analyzing their experience. Reflective practices can be done with different form. Reflective practices can include writing a journal, newsletter, poem, or report; using art such as painting a mural, making a sculpture, or putting together a scrapbook of photos. Apart from these, different digital resources are available to practice reflective activities globally in the modern digital world. This paper attempt to explore reflective practice in teaching and learning from psychological theories with help of modern digital resources.
***Key words**: Reflection, Reflective practice, Digital resource, experiential learning, Digital Documents, Online diaries, blogging, e-portfolio.*

Introduction

Awareness of and ability to understand one's own actions important for one's living. As the famous Tamil proverb "பார்க்காத பயிரும் கேட்காத கடனும் பாழ்" [Uncared crops and unsolicited credit will be ruined], If a person not think about what is he doing, he will not able to describe about goal of his life. Similarly, thinking about one's activity helps to fix the goal in his life when a business man able to think about his activity to develop his business growth, why can't a teacher utilize this practice in his or her method of teaching. So thinking process leads to reflection on experience. Reflection occurs when people start thinking about what, when, why and how.

Reflective Practice is a modern term evolve self-improvement. Reflective practice is closely linked to the concept of learning from experience. Essentially Reflective Practice is a method of assessing one's own thoughts and actions, for the purpose of personal learning and development. This paper explores the reflective practices with digital scenario.

Reflective Practices - Concept

Reflective practices are methods and techniques that help individuals and groups reflect on their experiences and actions in order to engage in a process of continuous learning. Reflective practice enables recognition of the paradigms – assumptions, frameworks, patterns of thought and behaviour – that shape the thinking and action.

"Reflection is a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations" (Boud et al.1985).

"Reflective practice involves thinking about and critically analyzing one's actions with the goal of improving one's professional practice. Engaging in reflective practice requires individuals to assume the perspective of an external observer in order to identify the assumptions and feelings underlying their practice and then to speculate about how these assumptions and feelings affect practice." (Imel 1992).

Reflection is deliberate and mindful thinking about one's experiences and the self-evaluation of feelings, decisions, understandings and actions, which may lead to development of professional learning for professional practice. Reflection which demonstrates these attributes is regarded, in this research, as 'effective reflection' and is associated with reflective practice (Hegarty, 2011).

Need of Reflective Practice

Teaching and learning is a complex whole. In that process, the concept formation or transformation is not cent percent achieved depending on subject area, learning environment, time consideration, nature of learner, and presentation of teacher. But teaching is effective when learner feel it. That feeling can be brought by reflection of their experience.

Reflection deepens learning. The act of reflection make sense of "what we have learned, why we learned it, and how that learning took place". Reflection also allows to widen learning by linking theory and practice. In reflective practice, learner engage in a continuous cycle of self-observation and self-evaluation in order to understand their own actions and the reactions they prompt in themselves and in learners.

Importance of Reflective Practice

In general, most of the teachers thought that their teaching is well planned one. But in practice, they start complaint against their student that, they are not listening, they have poor understanding and they have behaved badly. Such a talk can rise because, without spending more time to reflect on what has happened, teacher may tend to jump to conclusions about why things are happening.

Keeping well planned lesson will not attract the attention of the learner. It may give boredom to the learner. Teacher can have a start reflection before she/he start the lesson and every stage teacher follow the reflective activities. Therefore, it is important to prompt reflective thinking during learning to help learners develop strategies to apply new knowledge to the complex situations. Reflective thinking helps learners develop higher-order thinking skills by prompting learners to

a) relate new knowledge to prior understanding,
b) think in both abstract and conceptual terms,
c) apply specific strategies in novel tasks, and
d) understand their own thinking and learning strategies.

Historical Perspective of Reflective Practices

Reflection and reflective practices are not new term. It was used earlier in 20th Century. John Dewey was among the first to write about reflective practice with his exploration

of experience, interaction and reflection. Soon thereafter, other researchers such as Kurt Lewin and Jean Piaget were developing relevant theories of human learning and development. Some scholars have claimed to find precursors of reflective practice in ancient texts such as Buddhist teachings and the Meditations of Stoic philosopher Marcus Aurelius. There has been significant contribution of eminent people to thought about reflective practice. They are,

John Dewey (Dewey, 1933) states that reflective thinking involves a systematic, scientific process of describing experience and taking intelligent action to test hypotheses. It views learning as a reflective process on a continual series of experiences from which continuity of meaning occurs over time. **Buddha** (Nat Hahn, 1993) notes that, Buddhism emphasizes the direct experience of reality "direct practice realization brings about insight". **The Socratic Method** (Robinson 1997) has led to a theory of education grounded in skepticism and an approach of questioning and answering. This is on order to build a consistent thinking to consistent action.

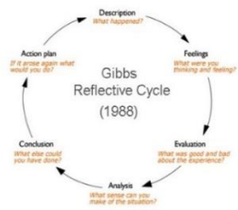
Max Van Manen (1997) suggests that three levels of reflectivity to describe various aims of reflection. ***Technical reflection*** (examines skills, strategies and methods), ***Practical reflection*** (considers the underlying assumptions of methods used to reach goals) and ***Critical reflection*** (focuses on the moral, ethical and equity aspects of process). **Donald Schon (1983)** differentiates between reflection in action referring to the process of observing our thinking and action as they occur. The process of looking back on experiences in order to effectively affect the future. Its reflection for action. **Osterman and Kottkamp 1993** "emphasize thought and action as integral processes but extends beyond to consider how context and culture shape both thought and action, respects the autonomy of the learner but recognizes the value of incorporating lessons drawn from theory, research and practice". **Langer and Colton** identify multiple influences on the knowledge construction involved in reflective practice. Constructions such as experiential knowledge, professional knowledge feelings, surrounding environment, and personal attributes.

Major Theories of Reflective Practice

There are many psychological theories explore the learning tactics with process of reflective practices. These theories attempt to provide broad notion on reflection and maximize the learning. Some of the major theories are,

Kolb: Kolb's reflective model highlights the concept of experiential learning and it focused on the transformation of information into knowledge. This takes place after a situation has occurred, and entails a learner reflecting on the experience, gaining a general understanding of the concepts encountered during the experience, and then testing these general understandings in a new situation. In this way, Kolb's experiential learning theory is represented as a four stage cyclical process of learning. These stages are: concrete experience, reflective observation, abstract conceptualization and active experimentation.

Gibbs: Gibbs discussed the use of structured debriefing to facilitate the reflection involved in Kolb's experiential learning cycle. Gibbs Reflective Cycle has six distinctive stages, leading from a description of the event / experience through to conclusions and consideration for future events.

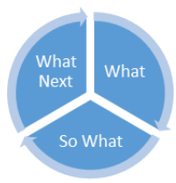


- Description - What happened?
- Feelings - What were you thinking and feeling?
- Evaluation - What was good and bad about the experience?
- Analysis - What sense can you make of the situation?
- Conclusion - What else could you have done?
- Action Plan - If it arose again what would you do?

Donald Schon: He introduced concepts such as reflection-on-action (after the event) and reflection-in-action (during an event/experience) which explain how professionals meet the challenges of their work with a kind of improvisation that is improved through practice

- *Reflection-in-action* can be described as the ability of a practitioner to "think on his or her feet", otherwise known as "felt-knowing".
- *Reflection-on-action* is the idea that after the experience a practitioner analyses their reaction to the situation and explores the reasons around, and the consequences of, their actions. This is usually conducted through a documented reflection of the situation.

Rolfe: He used three simple questions to reflect on a situation: What? so what? and now what? He considers the final question as the one that can make the greatest contribution to practice.



- **What? (Describe the situation.)**

What ...is the problem? ...was my role? ...happened? ...were the consequences?

- **So what? (Theory & knowledge building.)**
  So what ...was going through my mind? ...should I have done? ...do I know about what happened now?
- **Now what? (How to improve the situation.)**
  Now what ...do I need to do? ...broader issues have been raised? ...might happen now?

Reflective Practice in Teaching

Reflective teaching is an inquiry approach that emphasizes an ethic of care, a constructivist approach to teaching, and creative problem solving (Henderson, 2001). Reflective practice is an integral part of action learning. Action learning involves producing a plan of action (e.g. a lesson plan) or designing an experiment (e.g. a new activity). The action learning cycle provides a structured approach to reflective practice and it can be a very useful tool to enhancing the effectiveness of teaching.

Reflective Practice in Learning

The complete reflection process is essentially never-ending. It stays with students during every step of their journey and assists them in searching through the basic questions of: what, so what, and now what?

Reflection activities can include writing a journal, newsletter, poem, or report; using art such as painting a mural, making a sculpture, or putting together a scrapbook of photos. In the classroom more structured reflection activities such as directed reading, student narratives, ethical case studies and experiential research papers are often used.

Reflective Practice Through Digital

In the olden day, activities for 'reflective thinking' are practiced with the help of journal writing. It takes a long time to proceed into a single stage. But in modern day, there are plenty of digital resources available to practice reflection. The modern digital sources made easy sharing and get immediate feedback from the audience. So the digital resources provide a framework for developing learner's learning to continuous improvement of their practice. Some of the Digital resources for reflective practices are,

- **Digital Documents:** Starting with the most basic way of reflecting digitally, Microsoft Word or Google Docs could be used to create one or more files where one can write his/her reflections, add images and links.
- **Online diaries:** There are a few online diary options such as Penzu, Journalate or Diaro (which uses Dropbox to store and sync your diary). It will provide to entries by folder, tag them with keywords, search entries and sync across mobile devices and the web. It can also allow to add photos and files.
- **Digital notebooks:** Digital note-making platforms such as Evernote, OneNote and Keep go beyond journaling and offer possibilities for handling notes in all areas. Meeting/lecture notes, reminders and scanned article can be prepared. With these tools one can add audio, images and clip websites and as they sync across all devices.
- **Audio and video journaling:** To reflect using other media, one can use the online voice recorder Vocaroo (not mobile) or Sound Cloud to create short recordings. Similarly, for video journal, we video the tools provided on a smartphone or tablet.
- **Reflective blogging:** Reflecting in public and blogs are great to share the ideas. Private posts for the classroom provide pre-knowledge about the next day classroom. Word Press and Blogger are the most well-known platforms.
- **Email:** Email services provide great opportunity to think and write the concept. Teacher can use the email for providing assignment, asking question and more. Gmail, Yahoo, Rediff mail are most used email services. Although a direct email is a relatively simple and frequently used technology medium, teacher and learner chose to use this particular form for their reflection journals.
- **e-portfolio:** An e-Portfolio (electronic portfolio) is an electronic collection of evidence that shows your learning journey over time. Portfolios can relate to specific academic fields learning. Evidence may include writing samples, photos, videos and research projects, observations by mentors and peers and/or reflective thinking. The key aspect of an e-portfolio is reflection on the evidence, such as why it was chosen and what learned from the process of developing e-portfolio.
- **Group Chat:** Group chat provide opportunity to open discussion. Some of the application such as WhatsApp, Instagram, Google group have feature of instant chat as well as group chat. It may helpful for reflective practices.

Advantages of Reflective Practices in Teaching and Learning

Reflective practices develop critical thinking skills and improve future performance by analyzing their experience. This type of learning helps the student to deep learning from surface level learning. It is a range of activities, including self-review, peer review, and Personal Development Planning. It promotes personal and academic

activities. Reflection through Peer review is another means which allows students to collaborate and develop the social relationship among the good experience.

Implication of Reflective Practices by Digital Resources.

- Use e-journal to record the experiences may improve the reflection.
- Using e-document (such as word, note and more), teacher may improve and extend the knowledge of teaching. E.g. What has worked? What hasn't? Why? Where to next?
- Reading online article and giving the feedback to the article may be useful for reflective practices. This kind of reflections may come from relevant literature and any professional writings.
- Create a blog or online discussion forum may focus on the development of best practice in teaching.
- Periodically sharing the experience on online and get feedbacks, evaluate effectiveness of reflections.
- Establish a structure to assist the reflection with help of online resource. The structure could involve setting some specific goals in areas of teaching to develop such as teaching styles and methods, assessment and feedback methods, assumptions about students and the learning process.

Conclusion

Reflective practice is a process which analyzing how something was taught and how practice might be improved or changed for better learning outcomes. Even though the best methods of teaching sometime fails due to lack of systematic understanding. That systematic and logical understanding is possible through reflection. Reflection by digital resource is way to simply learn more about own practice. It improves the quality of problem solving skill in real life situation both individual as well as group in cooperative manner. If teachers make their student reflect on subject, then their teaching will be effective. Reflective practices definitely provide holistic understanding, critical thinking and completeness of learning.

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14. DIGITAL TECHNOLOGIES IN THE CLASSROOM

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Introduction

In recent years reference to 'Digital Technology in the Classroom' (DTC) can be taken to mean **digital processing systems** that encouraged active learning, knowledge construction, inquiry and exploration on the part of the learners, which allow for remote communication as well as data sharing to take place between teachers and /or learners in different physical classroom locations. This is an expanded notion of technologies that recognizes their development from mere information delivery systems and also clarifies their role in classrooms in contrast to their wider use across schools and learning centers.

What other terms are associated with digital technologies in the classroom?

Bring Your Own Device (BYOD)

- **Definition**

learners bring their own technology into the classroom for use as part of the learning activity

- **Example**

mobile phone is used to browse the internet as part of a research activity

- **Benefit(s)**

greater range of technologies available and lower cost to institution

- **Risk(s)**
  - difficult to control and monitor usage
  - some learners may have better devices than others
  - lack of teachers understanding/ training

E-Portfolios

- **Definition**

Learners and teachers create an electronic catalogue of work that tracks their learning journey. This is usually online and often uses multimedia files

- **Example**

A student portfolio of artwork is presented online through an e-portfolio. This includes scans of their sketches, photographs of displays and visits to galleries, written reflections, narrated videos of the artist (learner) at work and an audio logbook

- **Benefit(s)**

provides a way of quickly and seamlessly presenting a wide variety of material in different formats including details of process

- **Risk(s)**
  - data security and confidentiality
  - lack of teacher
  - understanding/ training

Flipped Classroom

- **Definition**

learners discover new content before the lesson from online videos or resources and then apply this knowledge in more personalized work in the classroom

- **Example**

Learners watch a video at home about how sedimentary rocks are transformed into metamorphic rocks. In class they work in groups to collaboratively create a diagram explaining this process of transformation

- **Benefit(s)**

more time for activities that promote deeper understanding and reflection

- **Risk(s)**
  - learners do not understand or are not able to access the flipped material
  - flipped learning leads to misunderstandings, that are not addressed in class
  - lack of teacher understanding/ training ensuring resources are up-to-date

Personal Learning Network (PLN)

- **Definition**

A PLN is an individual's loose collection of links with other people or resources. The aim of such a network is to facilitate an exchange of ideas that supports learning

- **Example**
  - Links can be through, for example:
  - online interest groups for example on Twitter and/or online and face-to-face courses
- **Benefit(s)**

access to a wide range of perspectives and expertise beyond the confines of the physical institution

- **Risk(s)**
  - data security and confidentiality
  - accuracy of information access to the network
  - lack of teacher understanding/ training

Virtual Learning Environment (VLE)

- **Definition**
  - a VLE is an e-learning education system that is web-based, but modeled on conventional face-to-face education.
  - It provides access to courses, course content, assessments, homework, links to external resources
- **Example**
  - Model
  - Blackboard
- **Benefit(s)**
  - easy way to collate and organize courses and information
  - flexibility of access
- **Risk(s)**
  - software can limit course structure
  - high level of maintenance

Interactive Whiteboards (IWB) allow images from a computer to be displayed through a digital projector, onto a large (usually wall-mounted) board. Users can interact with the content on the board using fingers or a stylus.

Software Applications (APPS) are designed to operate on mobile devices such as smartphone and tablet computers.

Web 2.0 refers to the second generation of the World Wide Web. Web 2.0 includes features and functionality that were not available before, for example. Podcasts, blogs, wikis, RSS (Rich Site Summary) – used for updating regularly changing web content, social networking and tagging.

What are the benefits of digital technologies in the classroom?

The potential benefits of DTC are that it can foster dialogic and emancipatory practice. Dialogic practice is that in which students are active, engaged and empowered participants in a conversation from which learning emerges. For example, learners working on a math modelling programme can start to have conversations about what they see on a computer screen without having to rely on terminology that they may not yet have (look at 'that', what happens if you do 'this'?) The teacher can then add the appropriate language into the conversation as the project develops.

Emancipatory practice is that, in which an individual student's ideas go beyond the learning prescribed by the teacher/syllabus as they draw on knowledge gained outside formal education to construct understanding. For example, in music lessons learners can use their own knowledge and expertise of playing instruments or using technology to construct their own recording environments (perhaps using their mobile phone). They can then bring in ideas that they have created at home or in instrumental music lessons.

- Different technologies can improve learning by augmenting and connecting learning activities. For example, in a geography lesson two classes in different schools may link up via the internet to explore cultural differences in relation to a particular global issue such as pollution or energy supply. The groups could work together to understand not just the issue itself but its impact on communities and individuals by talking to real people. In situations where bandwidth is limited this could be done at a whole class level via video or even over email or SMS (Short Message Service) messaging.

- Digital technology can often also be exciting for learners and offers a potentially more engaging alternative. At the same time, it is important to be aware that some learners may be less confident in learning with digital technologies and steps need to be taken to ensure equality of access. Digital technology offers immediate feedback for both the learner and the teacher.

What are the challenges/criticisms of digital technologies in the classroom?

A lot of time and resources are currently being invested into technologies and applications that have yet to be proven to be effective or efficient when compared to more traditional classroom learning contexts. Teachers and schools need to think carefully about when, why and how to use technologies as well as evaluating their efficiency and effectiveness.

- There is a 'digital divide' - the divide between those who have access to digital technology and those that do not.
- Implementing and then maintaining technology is costly particularly as systems can quickly become out of date.
- There may be problems with the existing infrastructure, for example internet connections may be inconsistent and/or slow.
- Safety for students and teachers is a key challenge with prevention of cyber-bullying, the hacking of personal information, access to illegal or banned materials and distractions from learning (such as social networking and mobile phone use) all being high on institutional agendas.
- Some uses of technologies can be harmful. For example, poor posture and eyestrain are common problems when working at desktop computers for prolonged periods. Also Repetitive Strain Injury (RSI) is a risk that occurs from the repeated actions necessary to control mobile devices.
- Evidence suggests that at the moment the potential of digital technologies in the classroom is not being realized. A report on digital technologies from the charity Nesta in the UK notes, "What is clear is that no technology has an impact on learning in its own right; rather, its impact depends upon the way in which it is used".

Practical tips

How can schools support the use of digital technologies in the classroom?

Schools can allow teachers and learners the freedom to explore potential new uses of devices and systems as well as combinations of technologies into novel digital environments. For example:

Raspberry Pi is one way to encourage teachers and learners to create technological solutions to problem- based tasks (see www.raspberrypi.org).

The Scratch programming interface is a further way of encouraging learners to create their own environments and has been used to develop understanding in a wide range of subjects (see scratch.mit.edu). This will help to foster the effective dialogue and emancipatory practice that is a component of deeper critical understanding.

Teachers and learners should be encouraged to share their practice with each other in the classroom and more widely.

Conclusion

Teachers can make the best use of technology in the classroom by developing their awareness of a range of digital

technologies and considering carefully both how and why they can be used to support students' learning. Effective selection of software and devices is only part of the story. The consideration of what learning will be achieved and how the technology may help is fundamental to its effective deployment.

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15. TEACHING AND LEARNING WITH MOODLE IN HIGHER EDUCATION

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Abstract

The Internet access and use of Laptops have created the technological conditions for teachers and students who benefit from the diversity of online information, communication, collaboration and sharing with others. The integration of Internet services in the teaching practices can provide thematic, social and digital enrichment for the agents involved. In this paper we will talk about the advantages of LMS (Learning Management Systems) such as Moodle, to support the presenting lectures in higher education. We also will analyses its implications for student support and online interaction, leading educational agents to a mixing of different learning environments, where they can combine face-to-face instruction with computer-mediated instruction, blended-learning, and increases the options for better quality and quantity of human interaction in a learning environment. **Keywords**: Higher Education, Technology, Moodle, *virtual classroom.*

Introduction

With the use of technology, education took a big leap and is changing its paradigms, from a closed model, and teacher-centered classroom to a model more open and student-centered, where the teacher moves from one holder of knowledge for a learning mentor, able to manage diverse discourses and practices as well as stimulate the intellectual capacities of students in the treatment of information available. In network there is much valuable information, but there are also many errors and controversies instead of teaching may confuse the students

Nowadays, several tools can promote knowledge and learning, many practices were improved, such as audiovisual resources that were once closely tied to the television and video. The Internet is an excellent tool for use in the classroom because it allows extension of horizons, so that students learn to communicate and collaborate, encouraging, therefore, learning without proper care, the experiences in the classroom are not successful. There are numerous environments that meet a set of features for creating and structuring of courses in the distance. These environments are also known as LMS (Learning Management System). Some of these environments used for creating and managing these online courses are: Moodle, TelEduc, BlackBoard, WebCT, Toolbook, TopClass Server, among others.

Purpose-Moodle

- Moodle to centralize and simplify administration and management of teaching and learning through e-learning.
- This system covers the entire process of distance learning, possessing interface and student teachers, tutors, to administrators and the administrative part
- Employees and students to plan their learning processes, and let's work together, through the exchange of information and knowledge
- The courses that are developed on the web have the advantage of providing the content for students anywhere in the world, faster than the other conventional methods distance education
- The communications resources of the web may make it more efficient to communication between teacher and students, when compared with other conventional methods.

Moodle-Definition

Moodle (Modular Object-Oriented Dynamic Learning Environment) is a Virtual Learning Environment (VLE) used by colleges, universities and schools worldwide. This is a web based application which is a safe and secure environment, where students can access learning materials and communicate with their tutors and other students. It is organized into course; you will find home assignments, IBHT course notes, and many more learning aids in each course. If your IBHT course has resources on Moodle, your tutor will inform you how to access them.

Your Moodle account is linked to your email address to which messages are sent, you should check this email account regularly in case your instructor has sent you messages. Access to your courses on Moodle is available 24/7

Why Moodle

The Name Moodle is an acronym for ***Modular Object Oriented Dynamic Learning Environment*** and is a course management system (Course Management System - CMS) through the Internet, if also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It is a free web application that educators can use to create effective online learning sites. One of its main advantages is its open source, or has open source allowing any user with programming knowledge to modify and adapt the environment according to their own needs. Moodle can be installed at no cost at many servers. How has code opened there are no maintenance costs need to pay for upgrades. Nobody can force you to make updates, buy tools that you do not want or determine how many users should possess; the teacher manages the platform according to their needs. This platform is widely used worldwide by universities, communities, schools, instructors, courses, teachers and even businesses. The number of users and developers, who are working today in the form of collaborative communities to include more features in Moodle, has been increased. The great success Moodle is also due to the fact that the system is available to your code developers in various parts of the world to contribute new applications for the program, causing the system is today one of the most used in courses in the distance. Although initially designed for higher education environment (university), Moodle has quickly become used across a broad range of organizations worldwide to conduct courses fully online or support face to-face teaching and learning. In reality, Moodle gives a less sophisticated and structured environment than a full-fledged commercial LMS such as WebCT for instance. As a result of the OS development model, Moodle looks more like a set of tools that share an environment, while commercial LMS support a complete development process and provide complex management tools. The question is that, given the simple necessities of our potential users, and the fact that online courses do not have any dedicated management process, a set of tools was far enough for our requirements

Method of Delivery/Activities Are Available in Moodle:

- **CHAT**

The Chat module allows participants to have a real-time synchronous discussion. This is a useful way to get a different understanding of each other and the topic being discussed – the mode of using a chat room is quite different from typical internet forums. Chat contains a number of features for managing and reviewing chat discussions.

- **DATABASE**

The Database module allows the lecturer and/or students to build, display and search a bank of record entries about a topic. The format and structure of these entries can include images, files, URLs, numbers and text amongst other things. Although the database currently has issues exporting data for different modules, it is sometimes convenient to store and share data with all the participants. Database consists of multiple fields, which you need to create. You also set each database to decide how many entries each participant must write in order to view other entries, minimum and maximum entries one is allowed, and so on

- **FORUMS**

Forums are used for asynchronous online discussion. By subscribing to a forum, participants receive copies of each new post by email. Teachers can impose subscription on everyone if they want to, and in this way she can use a forum to contact all students on a course. They allow students and teachers to post comments in a central place to simulate (and stimulate) discussion. All Moodle courses automatically come with a News forum which cannot be removed, and all course participants will receive email whenever anything is added to that particular forum. However, you can add new forums as well

- **GLOSSARY**

The Glossary activity allows participants to create and maintain a list of terms and definitions, as in a dictionary. It can be used to build an annotated list of useful websites or FAQs. The definitions can be searched or browsed in many different formats, and can be linked from other places on the site.

- **QUESTIONNAIRE**

The questionnaire module in Moodle allows you to create a survey or questionnaire for students to fill out, for instance a course evaluation or a reading response survey. You may choose whether or not the responses are anonymous

- **SCHEDULER**

Scheduler is a Moodle Activity that allows the course instructor to post available meeting times and then has the students sign up for the slot that best suits them. This is useful for required meetings between student and professor, such as advising days, or simply for optional office hours.

- **LESSON**

A Lesson allows a lecturer to create conditional pathways through material. It consists of a number of pages, each page normally ending with a question and a number of possible answers. Depending on the student's choice of answer they either progress to the next page or are taken back to a previous page. When students answer a question, they are redirected to whatever page you'd like them to see next based on their answer. It can be a helpful tool for practicing material, studying, and testing

- **HOT POTATOES**

The Hot Potatoes module allows teachers to administer Hot Potatoes quizzes via Moodle

- **ASSIGNMENTS**

Assignments allow students to submit work online, including uploading any file type (Word document, PowerPoint, video clip etc.). Lecturers can grade and give feedback.

Educational Implication of Moodle

Moodle is educational software grounded in a philosophy of collaborative learning, often referred to as social constructionist pedagogy. This approach views learning as a creative social process, as much as it is an individual one, where people learn together by investigating, analyzing, collaborating, sharing, and reflecting. Perhaps this is a key reason why it has had such a rapid uptake among the educational community. Moodle was built with elements and tools that embody pedagogical understanding, including these concepts:

- Effective learning takes place when learners are actively engaged in constructing knowledge (i.e., creating or doing), rather than passively reading, memorizing, or viewing.
- An inquiry- and discovery-based approach is an effective way to learn.
- Students learn better with supplemental materials.
- Observing and interacting with our peers and the community is also crucial for learning and retention.
- Collaborative environments encourage participants to be both teachers and learners at the same time.
- Learning environments need to be flexible, and adapt quickly to satisfy learner needs.
- Creativity and innovations are sparked (emotional appeal) when everyone has an opportunity to contribute, exercise his or her voice, and participate.

Moodle - Advantages

- Moodle not only allows for learning to be done online or at a distance
- It allows for resources to be available to students in who are in instructor-led classes.
- Moodle also has different options and tool available for use.
- Moodle allows for communication to happen between the instructor and students and students can also communicate with each other
- Communication in Moodle range from forums, blogs, chats and messages among the individuals who are enrolled within a course.
- The course is an online or distance learning course communication is key to ensure that the lesson is effective
- A Low-Cost Solution for Successful e-Learning

Conclusion:

The Moodle is an e-learning platform used throughout the world. Universities, communities, schools and teachers serve up to her to communicate and transmit information to their educational communities. MOODLE manages and monitors students' learning processes more easily and effectively than traditional methods, helping teachers improve the effectiveness, breadth, and depth of classroom teaching by giving students more exercises on preparation, revision, intensive drilling, and assessment. The advantages are obvious from the improvement in students' marks after using MOODLE.

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16. INTERNET SELF- EFFICACY

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Introduction:

The use of internet has been enormous in our day-to-day life. At any cost we can get the information from anywhere. Through the internet we can get a huge store of general information, research findings, books and journals. Students can learn "credit based courses" without being in the class room, by availing internet facility. Even examinations are conducted "online" and results were announced through internet. It is widely used for distance education. Today most of the students are learning through the internet. so this article discusses the internet self-efficacy and its needs for individuals.

Internet is highly useful to establish access with various people at different places and also in the different kinds of information. This helps to exchange their ideas and communicate through e-mail, social Medias. It is widely used in education. The required information can get through information. So this article discusses the need of the internet self efficacy.

Self-efficacy has been defined in a variety of ways: as the belief that one is capable of performing in a certain manner to attain certain goals, as a person's belief about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives.

The concept of self-efficacy lies at the center of psychologist Albert Bandura's social cognitive theory. Bandura's theory emphasizes the role of observational learning, social experience and reciprocal determinism in the development of personality. Self-efficacy is a person's belief in his or her ability to succeed in a particular situation.

Internet self-efficacy, or the belief in one's capabilities to organize and execute courses of Internet actions required to produce given attainments, is a potentially important factor in efforts to close the digital divide that separates experienced Internet users from novices. Prior research on Internet self-efficacy has been limited to examining specific task performance and narrow behavioral domains rather than overall attainments in relation to general Internet use, and has not yielded evidence of reliability and construct validity.

According to Bandura, there are four major sources of self-efficacy.

- Mastery Experiences
- Social Modeling
- Social Persuasion
- Psychological Responses

Mastery Experiences:

"The most effective way of developing a strong sense of efficacy is through mastery experiences," Bandura (1994) explained. Performing a task successfully strengthens our sense of self-efficacy. However, failing to adequately deal with a task or challenge can undermine and weaken self-efficacy.

Social Modeling:

Witnessing other people successfully completing a task is another important source of self-efficacy. According to Bandura (1994), "Seeing people similar to oneself succeed by sustained effort raises observers' beliefs that they too possess the capabilities master comparable activities to succeed".

Social Persuasion:

Bandura also asserted that people could be persuaded to belief that they have the skills and capabilities to succeed. Consider a time when someone said something positive and encouraging that helped you achieve a goal. Getting verbal encouragement from others helps people overcome self-doubt and instead focus on giving their best effort to the task at hand.

Psychological Responses:

Our own responses and emotional reactions to situations also play an important role in self-efficacy. Moods, emotional states, physical reactions, and stress levels can all impact how a person feels about their personal abilities in a particular situation. A person who becomes extremely nervous before speaking in public may develop a weak sense of self-efficacy in these situations. However, Bandura (1994) also notes "it is not the sheer intensity of emotional and physical reactions that is important but rather how they are perceived and interpreted". By learning how to minimize stress and elevate mood when facing difficult or challenging tasks, people can improve their sense of self-efficacy. Bandura identifies four factors affecting self efficacy

- Experience
- Modeling
- Social persuasion
- Physiological factors

Necessitate of the Internet Self Efficacy

Internet self- efficacy is more important to all, because

- High levels of self-efficacy enhance one's accomplishments and feelings of personal well-being (Pajares, 1996).
- Self-efficacy helps one to remain calm when approaching challenging tasks (Pajares, 1996).
- Building self-efficacy in multiple areas increases one's confidence in mastering new domains (Ormonds, 2008).
- High self-efficacy increases one's willingness to experiment with new ideas (Ormond, 2008).
- Self-efficacy encourages one to set higher expectations for future performances (Ormond, 2008).
- High self-efficacy increases one's persistence and focus on a given task beyond previous levels (Ormond, 2008).

The above researches indicate important of internet and self-efficacy.

Conclusion

This helps the students to equip themselves to face the challenges in the future classes and also with the aspects of fast moving Globalized world. This article helps to understanding the role that Internet self-efficacy plays in the use of the Internet.

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17. QUALITY OF EDUCATION IN THE DIGITAL WORLD

A. JEMILA MARY, Asst. Professor in the Dept. of English, Muslim Arts College, Thiruvithancode, Kanyakumari District.

Abstract

Colleges and universities are in the midst of a pervasive and radical change driven by innovations in technology. Institutions must respond to change in a way that helps shape the future of higher education or find themselves in the precarious position of obsolescence. The flexibility and accessibility that online learning provides tends to attract students who are searching for ways to fit school into their busy lives. Not surprisingly, of the nearly 18 million undergraduate students enrolled in higher education, 32% of them work full-time and 25% of them are over the age of 30 (Hess, 2016). Indeed, "the most significant shift in higher education is the massive growth in the adult-student population" (Hess, 2016, para. 1). Today, the percentage has doubled. The internet is clearly opening the doors of higher education to people who would not otherwise be able to fit school into their life.

Key words: Higher Education, Obsolescence, Massive growth.

Introduction

"It is not the strongest of the species that survive, or the most intelligent, but the ones most responsive to change." Charles Darwin.

The words of Charles Darwin are strikingly relevant to the world of higher education. Colleges and universities are in the midst of a pervasive and radical change driven by innovations in technology. Institutions must respond to change in a way that helps shape the future of higher education or find themselves in the precarious position of obsolescence. The flexibility and accessibility that online learning provides tends to attract students who are searching for ways to fit school into their busy lives. Not surprisingly, of the nearly 18 million undergraduate students enrolled in higher education, 32% of them work full-time and 25% of them are over the age of 30 (Hess, 2016). Indeed, "the most significant shift in higher education is the massive growth in the adult-student population" (Hess, 2016, para. 1). Today, the percentage has doubled. The internet is clearly opening the doors of higher education to people who would not otherwise be able to fit school into their life. This paper presents the transformation in the field of education.

Digital Education in USA

HMHC is the largest provider of basal and supplemental K-12 education content in the United States by market share, and a provider of educational content, technology, and services worldwide. HMHC reaches over 50 million students in 150 countries through either institutional or consumer channels, and believes that nearly every K-12 student in the United States will use its content at some point during their school career. HMHC operates in the huge US education sector, providing it with a large addressable market. It dominates the sizeable niche of K-12 education indeed management claimed they had 52% share in their core' adoption' markets in 2014. HMHC is currently transforming its business from print to digital, and acquired EdTech from Scholastic Corporation for $575m last year to fuel this transition.

The current structure of the market allows HMHC to retain great pricing power. On the supply side the market is oligopolistic, with only three large players: HMHC, Pearson & McGraw-Hill. All three combined have over 90% of the K-12 market, and have historically been very rational on pricing. The K-12 sector represents a small portion of both Pearson and McGraw-Hill's revenues, and while they are also shifting to a digital model, they are distracted by fighting on several other fronts as well. On the demand side the market is highly fragmented, and in order to compete for contracts publishers usually need to have direct relationships

with decision makers at both state and local level, requiring the scale in terms of sales force and infrastructure that only the big three have. Decisions in the Education sector are not taken lightly, giving incumbents strong pricing power even though they are dealing with the Government.

Online Courses

Many universities, such as Stanford and MIT, have made educational material, known as Open Courseware, available. However, in the past year, there has been a major growth in what are known as Massive Online Open Courses or MOOCs. These courses, offered by services such as Coursera, edX, and Udacity, permit students to enroll in university-level classes and receive instructions via recorded lectures and supplementary materials posted by course staff. Other services, such as Khan Academy, simply offer many instructional materials on a variety of topics, and are intended primarily as a study guide.

The offered subjects vary drastically. A diverse range of classes are available, spanning all disciplines, with selections such as machine learning, medical neuroscience, global poverty, startup engineering, and law. The courses offered mirror the ones conducted by the universities themselves. Hence, if one decides to take "Machine Learning," a course offered by the director of the Stanford Artificial Intelligence Lab, Andrew Ng, they will receive similar instructions and will learn the same materials as the students at Stanford University who take this course. Some classes, such as Networks: Friends, Money, and Bytes, given by Princeton professor Mung Chiang, run simultaneously with the actual university class.

Princeton students enrolled in this class watch the lecture videos before going to class and discuss the material with the professor. The flexibility given by this platform, therefore, suits many different needs, both for students and professors. For distance-learners, it gives them access to previously difficult-to-acquire material at no cost, and for university students and professors, it allows them to save class time for discussion and clarification, rather than simply being told the material. Some courses on Coursera have even been approved by The American Council on Education for college credit. This allows students who need credit in one of these subjects (Algebra, Calculus, Pre-Calculus, Genetics, and Bioelectricity) can do so via Coursera's platform. This is perhaps the most promising indicator of the acceptance of MOOCs by traditional educational establishments.

Will MOOCs replace traditional universities?

Most definitely not. The value in university is not only the material or curriculum taught, but the opportunity to communicate directly and fairly easily with the professor. Additionally, the years of study and hard work going into the commitment of a university degree are attractive to employers, as it demonstrates strong work ethic and an ability to thrive in high pressure environment qualities which are vital for success in professional life. However, MOOCs are starting to be seen in quite a positive light, and certainly may be used by students and professionals alike seeking to expand knowledge or give a boost to their CVs.

Can MOOCs survive?

Profitability of MOOC platforms has now become a serious concern as they near a year's anniversary of being launched. While they remain committed to providing education for free, in order to survive, these platforms need be able to make some income for the material provided. The universities themselves are not overly concerned, but certainly sustainable revenue would improve the long-term viability of the project. A potential avenue for revenue could be in allowing employers to pay for access to student profiles. This can work because the companies behind the MOOCs have started to form partnerships with different corporate companies interested in recruiting certain students. Another option would be offering the courses for free, but making the certificates paid for. For the accredited courses, Coursera are offering paid-for proctored final exams via the service ProctorU. In proctoring services, proctors are connected to the students via webcams; such exams cost around 60 to 90 US dollars.

Technology Driven Changes

Here are some other interesting facts related to the technology-driven changes in higher education (Taken from the Cisco Connected World Technology Report). Approx. 3,000 college students (18-24 years old) and young professionals (21-29 years old) were surveyed, representing 14 different countries.

- 66% students say that mobile devices (e.g. laptop, smart phone, tablet) are the "most important technology in their lives"
- 55% of students say they could not live without the internet, indicating it is an integral part of daily life
- Approximately 90% of students and young professionals have a Facebook account

Role of ICT

Rapid developments in Information and Communication Technology (ICT) have made it an important part of our daily lives, from staying in contact with people, to checking traffic and booking tickets. However, ICT can also be a useful tool for teachers in advancing 21st century learning. As the new Teaching in Focus (TIF) brief' teaching reports, the use of ICT for students' projects or class work is an active teaching practice that promotes skills for students' lifelong success. So how common is the use of ICT in the classrooms? Across the countries and economies participating in the Teaching and Learning International Survey (TALIS), it seems that ICT is still used less frequently than more passive teaching methods, such as working in exercise books. For example, over 70% of TALIS teachers report checking students' exercise books frequently, while only 38% report frequently using ICT. This is surprising given the prevalence of ICT in most students' lives across TALIS countries and economies.

A Promising Future

- The outgrowth of digital media platforms has changed many industries permanently. The music industry, with iTunes and Spotify; films, with Netflix and Love film and books with e-books and the Kindle are the most obvious examples.
- Perhaps now even education will get its own overhaul and we will see increasing demand for these services. The future certainly looks promising, and the opportunity to learn material that might normally not be available is certainly beneficial for the intellectual development of an individual, and the society as a whole.
- Whether one is a school student, at university, a working professional, or retired, there is something to be learned from the wealth of programmes offered.

Conclusion

Teachers don't like switching textbooks or changing their lesson plans, and authorities are unlikely to dislodge an incumbent with a strong brand in favor of a new competitor without a track record or the right relationships. The transformation of HMHC's business from print to digital will have a dramatic effect on the business and in turn the way in which it is viewed by the market. The impact of the shift to digital is being felt in every industry, and despite a slower pace this holds true for education. HMHC has positioned itself very well for this transition, most notably by investing heavily in developing a digital platform.

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18. LEARNING AND TEACHING IN THE WORLD

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Abstract

The use of social media- from blogging to on-line social networking to creation of kinds of digital material is central to many teenagers' lives. Downes (2005), Anderson (2007) and Walton et.al. (2007) argue that learner's familiarity with web 2.0 technologies opens up a new space for and style of learning. This new style of learning focuses on collaborative knowledge building, shared assets, problem solving, and the breakdown of distinctions between knowledge and communication. The production and utilization of ***podcasts, blogs, videos, and interactive tutorials****. Collaborative, computer- based learning environments can work to stimulate student learning and the process of inquiry. "It seems that use of ICT can impact favorably on a range of attributes considered desirable in effective learner.*

- *Problem solving capability.*
- *Critical thinking skill.*
- *Information- handling ability.*

From the above select research review it is found that computers and web 2.0 tools have changed the way we teach and learn. Teacher teaching skills are critical to student's experience and developing confidence with technology. To thrive in the digital world as a teacher, a teacher should concentrate on technological literacy apart from other literacy. In the light of the above facts, this paper aims at describing the learning and teaching skills in the digital world.

Learning and teaching, in a digital world provide practical implementation strategies for creating a culture of deep and reflective learning for students and educators. This paper explains the rationale and implications digital integration in all classrooms and describe digital tools and resources to engage all students in authentic learning.

Introduction

Rapid development in Information and Communication Technology (ICT) has made it an important of our daily lives, from staying in contact with people, to checking traffic and booking tickets. ICT can also be a useful tool for teachers in advancing 21st century learning. As the new Teaching in focus (TIF) brief 'Teaching with technology' reports, the use of ICT for student projects or class work is an active teaching practice that promotes skills for student's lifelong success.

So how common is the use of ICT in the classroom? Across the countries which participating in the "Teaching and Learning International survey (TALIS), it seems that ICT is still used less frequently than more passive teaching methods, such as working in exercise books. For example, over 70% of TALIS report teacher checking students exercise books frequently, 38% report frequently using ICT. This is surprising given the prevalence of ICT IN most students live across TALIS countries.

One possible reason for teacher's infrequent use of technology is the lack of resources in their schools. Indeed, between 30 and 40 0f TALIS teachers work in schools

where principals report that shortages in ICT-related materials hinds the provision of quality Education. This finding should send a strong signal that there is a need for more investment in the provision of computers, software and internet access in the TALIS education system with an especially high percentage of teachers working in under-resourced schools.

A low rate of ICT use in classroom is also affected by teachers need for professional development. New technology in the classroom is constantly being developed, meaning that teachers may need help with keeping up to date. TALIS findings show that the majority of teachers across TALIS countries report moderate or high needs for professional development in the area of ICT skills for teaching. Comprehensive development programs in order to effectively implement ICT into their classroom practices would be of benefit for many teachers.

Teaching in A Participatory Digital World

Social networking, cloud-based computing, and mobile technology are transforming how people, learning, work, and play. Technology has evolved quickly from personal computers and networks participatory social, academic, and political web2.0 environment with a new vocabulary and new temporal and spatial interactions. Web 2.0 applications - safari, Geocaching, Flickr Google. Blogger Garage Band Wikipedia You tube movie Face book, Twitter, iPhone and iPod-are part of a new user-centric information infrastructure that emphasizes creative participation over presentation, eclogues focused conversation and short briefs written in less technical, public vernacular, and facilitates innovative exploration, experimentations and purposeful tinkering that often from the bases of situated understanding that emerges from action not passivity.

The digital world calls for changed mindsets about schooling, teaching, learning and assessment. Teachers who are often more comfortable with broadcast and interactive technologies are now expected to embrace online participatory learning technologies in support of active, passion based learning by students who in a digital world. These teachers need support in making major shifts in their practice. How they work with displinary knowledge, how they design for learning and assessment, and how they embrace technology. It is time for top-down approaches to schooling to give way to the active, engaged and collaborative teaching and learning relationships made possible by new educational technologies.

In this digital world, engaged teaching matters more than ever. Combining inquiry and technology opens the door to powerful new teaching and assessment practices that result in documented benefits for learners.

A Shifting Digital World

The world of work has change. Technological advances along with always available, personal mobile devices are ambling corporate communities of practice in which colleges share experiences reflections and insights in a continuous dialogue, unreleased from the four walls of an office or the hours of a standard workday. These 24/7 a synchronous communication capabilities allow corporate knowledge workers to take control of the workday and extend collaborations online in ways that significantly change how 21st century work is conceived, conducted and completed.

Teaching and Learning in the Digital World

The most powerful thing teachers do to engage students is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences. In other words, teaching matters. Research on engagement indicates that the schools they attend, this holds true at both the elementary and secondary levels. In order to improve learning in a digital world, we need engaged teachers who are supported by professional learning opportunities to continually improve competencies and their teaching and assessment practices.

In 21st century learning students can become engaged in challenging work that has value beyond the classroom in authentic, inquiry based tasks that captivate their hearts and minds. The benefits of both students and teachers of learning in such contexts, using technology in appropriate and innovative ways, have been well documented. Strong discipline based inquiry work exhibits a number of very discernible characteristics, including academic rig our authenticity Assessment that is used in purposeful and authentic ways, connections with experts beyond the classroom. From a longitudinal study at a “1-2-1Loptop” school, student work demonstrating deepens understanding of sophisticated concepts emerged from discipline. Based inquiry tasks that were intentionally designed with clearly defined criteria in mind.

Reflection on learning is important, both for students and for teachers, and this too can be enhanced by appropriate uses of interactive technologies. Students learn better when they express their developing knowledge either through conversation, or by creating written assignments, media artifacts or visual messages, are provided with opportunities to reflectively analyze their state of knowledge.

Outside of formal schooling almost all learning occurs in complex social environments. Teachers who design for peer collaboration and individual reflection on learning cultivate stronger learning outcomes.

Digital and Learning Literacy

Teachers should work to: design flexible learning opportunities, situate those learning opportunities, where possible and appropriate, in authentic context, continually review how technologies are integrated into the curriculum, support students to use their own technologies and to develop effective strategies for learning with technology, use assessment and feedback to encourage innovation in learners approaches to study, reward exploration as a process, empowering students to negative increasingly complex learning landscapes, and support student self-assessment and review.

Conclusion

More skills required from a teacher in the digital world to impart knowledge. So, to be employed as a teacher or to thrive in the digital world as a teacher, one should update themselves on the above mentioned skills. The sayings of senior libertarian, oxford Brookes University that "It's about being literate for the modern world, it's about functioning fully as a professional, as an academic but also as a human being. "Is to be borne in mind when think of digital world.

19. THE IMPACT OF DIGITAL LEARNING IN THE MODERN WORLD

A. ARUL PRINCY &
A. ARUNA, B.Ed. –II year Krishnasamy College of education for Women

Abstract

The aim of this review is to present a synthesis of the evidence from meta-analysis about the impact use of digital technology in schools on children's attainment. It is based on the concept of constructive method technology. This is a collaboration tool in mediating and negotiating learning between the instructor and the students Integrated next-generation technologies may equip students to continue their education, their entire lives, and can address three goals: fortifying student skills, increasing education and enabling students to be innovative and entrepreneurial. Creating a significant ripple as a dynamic content provide with deep learning by the student.

Keywords: *Digital technology, Constructive method, Learning skills.*

Introduction

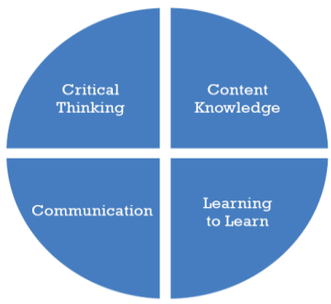
The purpose of this review is to identify implications for future investment in the use of digital technology for learning in schools. Digital technologies are now embedded in our society. Focus has shifted from whether or not to use them in teaching and learning, to understanding which technologies can be used for what specific educational purposes and then to investigate how best they can be used and embedded across the range of educational contexts in schools. Summary of key points Overall, the research evidence over the last forty years about the impact of digital technologies on learning consistently identifies positive benefits. The increasing variety of digital technologies and the diversity of contexts and settings in which the research has been conducted, combined with the challenges in synthesizing evidence from different methodologies, makes it difficult to identify clear and specific implications for educational practice in schools.

However, a causal link cannot be inferred from this kind of research. It seems probable that more effective schools and teachers are more likely to use digital technologies more effectively than other schools. We need to know more about where and how it is used to greatest effect, then investigate to see if this information can be used to help improve learning in other context. The purpose of this review is to identify implications for future investment in the use of digital technology for learning in schools.

Digital technologies are now embedded in our society. Focus has shifted from whether or not to use them in teaching and learning, to understanding which technologies can be used for what specific educational purposes and then to investigate how best they can be used and embedded across the range of educational contexts in schools. Summary of key points Overall, the research evidence over the last forty years about the impact of digital technologies on learning consistently identifies positive benefits. The increasing variety of digital technologies and the diversity of contexts and settings in which the research has been conducted, combined with the challenges in synthesizing evidence from different methodologies, makes it difficult to identify clear and specific implications for educational practice in schools.

Redefined Education through Digital Learning

Digital learning is any instructional practice that effectively uses technology to strengthen a student's learning experience. Digital learning encompasses a wide spectrum of tools and practices, including, among others, online and formative assessment; an increase in the
focus and quality of teaching resources and time; online content and courses; applications



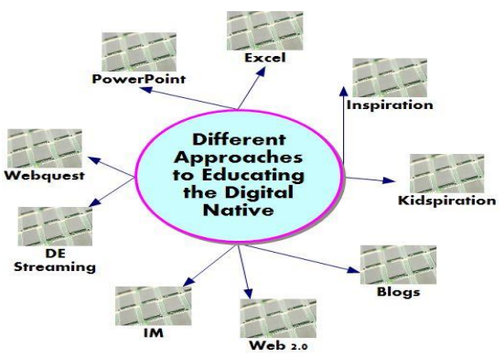
The tasks of meeting are conducted in an organized and systematic manner. A comfortable, congenial, relaxed atmosphere A spirit of cooperation, goodwill and tolerance No domination of anyoneϖ Constructive criticism and discussions involving all participants without personal attacks, unnecessary arguments and destructive comments Disagreement, conflicts and criticisms should be handledϖ constructively Decisions made in democratic matter with Mutual respect for eachϖ other Commitment towards collective purpose and a willingness to makeϖ positive constructive contribution by all participants. Stages of conducting a staff meeting 1. Preparation and planning 2. Actual meeting 3. Post meeting activities.

Constructivism and active experimentation

Active experimentation refers to students making use of concrete experiences, their reflective observations, and knowledge gained through abstract conceptualization in new settings. The cognitive expectations for students in active experimentation include assuming learner control, or in other words, taking responsibility to bring the pieces of their learning together to problem solve and apply what they have learned in new settings.

For preservice teachers this involved agency (Cope & Kalantzis, 2000), with students demonstrating their knowledge and skills, as well as redesigning or transforming information as they used and applied it through writing lesson plans, presenting and evaluating lessons, and speaking about their work. Students also created short videos using iMovie or Windows Movie Maker to illustrate their work in designing a classroom environment that supported literacy development.

The movie clips also demonstrated their teaching abilities, which they described and critiqued. Audio clips created by the students were used to discuss fluent reading or interactions between them and their students. Students used the SMART Board, SMART Notebook software, and PowerPoint as tools to prepare and present slideshows demonstrating their knowledge of literacy development and instruction. In addition to the modeling provided in class, students were encouraged to obtain assistance with creation of the SMARTNotebook and PowerPoint presentations through use of reference materials and people who would provide direction, but more importantly, feedback on their projects.



In addition to video and audio clips, SMART Board hardware and software, and PowerPoint, students used Inspiration software and the discussion board as tools to apply principles or theories in problem-solving assignments.

These included discussion of their work in making instructional decisions regarding children's reading and writing development and sharing their own knowledge of instructional approaches and strategies to promote strategic reading on the part of students they worked with in practicum classrooms. Digital learning enables new strategies and formats, such as online and blended learning and competency-based learning, which have the potential to contribute to deeper learning. Providing every student with the opportunities for deeper learning is not possible without a technology-enabled network of tools and strategies to customize and extend learning.

Data Collection

As part of the inquiry process investigating connections between technology tools and construction of knowledge in this course, data were gathered on students' use of technology tools, their use of information on learning styles to guide their own learning, and student performance in the course. Responses were categorized into the four learning style modes—concrete experience, abstract conceptualization, active experimentation, and reflective observation. Data sources for this study were raw scores on the learning style inventory; scores on four course exams, a reading and writing analysis project, and a literacy PowerPoint project; scores from discussion board posts.

Although some of the articles were required reading, students were free to access these along with other resources for their individual construction of knowledge. Shared knowledge that resulted from discussion and shared experiences were planned to facilitate social construction of knowledge, knowledge that would build on, strengthen, and extend individual construction of knowledge.

Constructivism and Active Experimentation

Active experimentation refers to students making use of concrete experiences, their reflective observations, and knowledge gained through abstract conceptualization in new settings. The cognitive expectations for students in active experimentation include assuming learner control, or in other words, taking responsibility to bring the pieces of their learning together to problem solve and apply what they have learned in new settings.

For preservice teachers this involved agency (Cope & Kalantzis, 2000), with students demonstrating their knowledge and skills, as well as redesigning or transforming information as they used and applied it through writing lesson plans, presenting and evaluating lessons, and speaking about their work.

Methodology

This research study was an inquiry into the connection between technology tools and construction of knowledge in a pre-service teacher methods course. Would technology-enhanced learning experiences aligned to learning styles of students support a constructivist setting and students' understanding of course content?

To answer these questions, researchers used a single-group design in which Students engaged in individual and group activities in and outside of class, making use of technology tools, and completed individual and group assignments to fulfill course requirements. Data were then collected on

students' learning style preferences, use of technology tools, and student performance in the class.

Conclusions

This paper concludes as Technology tools have the ability to address students' learning needs in terms of learning style preferences, as students work as individuals and groups to construct knowledge. Students must also have knowledge of task requirements for modes of learning, knowledge of how to use technology tools effectively.

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20. ONGOING PROFESSIONAL LEARNING IN A DIGITAL WORLD

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Abstract

In this paper we have presented the learning in a digital world change's the mindsets about schooling, teaching, learning, and assessment – and engaged teaching matters more than ever. Combining inquiry and technology opens the door to powerful new teaching and assessment practices. It is time for top-down approaches to schooling to give way to the active, engaged, and collaborative teaching and learning relationships made possible by new educational technologies.

Keywords; *Professional learning, Transmedia, Technology, Assessment, New Teaching.*

Introduction

In this digital world what we live in today, and comes as a result of many innovations and technology advances over the last several decades for example, "technological breakthroughs have revolutionized communications and the spread of information. In 1875, for example, the invention of the telephone breached distance through sound." and by the 1940s television was broadcasting both sound and visuals to a vast public. Professional Learning for a digital world requires a professional learning culture where teachers see themselves as facilitators of learning and have a sound understanding of 21st century learning. In New Culture changes have occurred with new digital technology. Teacher Professional Learning needs to take place within a professional learning community of learners in which teachers and school leaders' work together to improve the learning conditions and results of students in school.

Learning is more than memorization and recall; it is an active, situated, and engaged process of making meaning, interpretation, and developing deep understanding. Teaching is more than information delivery; engaged teaching involves the design and support of rich learning experiences. Technology is more than a tool; it supports deep and engaged learning, simultaneous articulation, creation, and reflection in participatory social networks and dynamic ecosystems. Training teachers in the use of current technologies will not promote the engaged and active learning we need. Instead, teachers need continuous professional support while they learn to design rich, authentic learning tasks and support the evolving needs of their students. Teachers as well as students learn by engaging in meaningful design work; by studying, doing, experimenting, and reflecting; by collaborating and conversing with peers; by sharing what they see, do, and create with others.

In order to understand how to effectively design learning that uses technology to increase student engagement, teachers need opportunities to engage and learn in similar ways themselves, and subject their learning to peer review and critique. Transmedia is a form of storytelling that is used over multiple platforms and formats using current digital technologies, this includes literature (books, graphic novels, and books etc.) films and social media (Facebook, twitter and Instagram etc.).

With the children of this generation growing up in the digital world, it should be no surprise that digital technology and transmedia is now becoming apart of the education system. It uses different platforms and digital technologies that help to engage, evolve and involve young minds. Different forms of media can be used for education to enhance learning for children and involve families in their children's education. Online learning is now synonymous with professional learning and these options will continue to expand with increasing innovative use of technology, which will include formal and informal opportunities to learn and

share knowledge. This new professional focus on acquiring new knowledge and skills as a 'just-in-time' approach is a significant shift in the way school leaders think about professional learning.

Transforming Professional Learninfg in A Digital World

The online learning space is transforming the approach to professional learning for school leaders, but there are challenges in the movement to embrace technology. Yet, if teachers persist in using traditional modes of delivery and engagement in professional learning, the risk is to reduce the scope and efficacy of extensive professional learning and practice in the future. As Fullan says, there are 'trouble spots' in integrating the three dynamics of technology, pedagogy and change. However, he also is optimistic about the creative opportunities and advantages for leaders to build collaborative links and networks. The exciting challenges are to accept change, to address the push and the pull, and to facilitate the adoption of technology as widely as possible in the context of school leadership.

Advantages

Online classes are an increasingly important part of higher education. online courses were once viewed the way MOOCs are viewed today, said Lewis. "They were going to save all this money … and education would be free and open," she said. But well-done online classes take effort, money and time, she said, citing the need to build in opportunities for students to interact with instructors. New emerging **educational technologies** are changing the way we learn. Education has become too flexible and fan. Technology for education is promoting individual learning and mobile learning, both teachers and students are benefiting from this **new technology for education**. which can allow us to learn on our own. Individual learning is good, because a student will not feel shy or embarrassed when they fail to learn something. It also promotes individual research and this helps students to deeply learn about a specific topic of interest.

Disadvantages

Today many school uses TV as teaching aids and even play cartoon to keep engaged the nursery students. If we have some Mathematics problem, then we have calculator. Within a single click answer is in front of our screen. There is no need of efforts applied by our mind in solving that problem but for doing complex calculations calculators are very helpful for us. Specially for doing scientific calculations, calculator can solve it very easily. That use of calculator is helpful not by a fifth grade student for his Mathematics calculation both as well as physical development also deeply affected by long hours of TV viewing.

Conclusion

Investments in high quality professional learning opportunities to support teachers in designing meaningful, highly engaging, blended learning experiences for students do pay off. Teachers matter more than ever, and the education system needs to be held accountable for the teaching that is practiced in the current technology-rich environment.

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21. THE ROLE OF TEACHERS' IN THE DIGITAL WORLD

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Abstract

The teachers' role in the 21st century has become more complex in the present changing world here knowledge is almost unlimited. Teachers are expected to become technologically oriented and responsible not only for their teaching but also for their students' learning. Today teachers are required to be facilitators helping learners to make judgements about the quality and validity of new sources and knowledge, be open-minded and critical independent professionals, be active co-operators, collaborators, and mediators between learners and what they need to know, and providers to scaffold understanding. In this digital era, teachers' role has shifted from mere preacher to the manager of students social and emotions behaviours; mentor for their learning and over-all development as a balanced citizen; motivator for slow learner and a fast learner in digital environment. He has to keep watch on the time spent by learners for their proper time management which make certain that the learner utilizes optimum e-resources. He has to address social and emotional issues that affect learners' learning, and be ready to make changes when their learning stalls.

Keywords: *Teachers' Role, Digital Era, Technologies, Educational Changes.*

Introduction

The earlier generations' drive to study was robustly rooted in conscientiousness. The new generations have

different motivational profiles: in their lives interest, emotions, and engagement matter much more. Teachers' role in the 21st century has become more complex in the present changing world. Teachers are expected to become technologically oriented and responsible not only for their teaching but also for their students' learning. They have to cater for particular needs of individual students in heterogeneous classes, and create a student-centered learning environment which endeavors for excellence, and offers opportunities for enquiry and dynamic learning. Teachers need to meet the standards of the curriculum while enhancing students' creativity, curiosity and motivation. They need to ensure a safe ambience in their classrooms and maintain relationships with students, parents and staff.

In the new digital and knowledge society in the 21st century, education is facing great challenges from traditional ways of learning towards innovative ways of learning. It also raises great demands for the transformation of teacher roles from the traditional knowledge transmitter to a new set of roles such as facilitator and coordinator. This transformation requires that teachers can face their new tasks in a more flexible way and be prepared for their new roles. The role of teachers has changed and continues to change from being an instructor to becoming a constructor, facilitator, coach, and creator of learning environments.

The world has become more complicated, competitive and intertwined. In order for individuals to survive and thrive in the era of globalization and digitalization, people should equip with problem-solving skills, creative mindset and information literacy. Conventional teaching is not able to educate adequate citizen to live in the 21st century.

Role of Teachers in digital world

In this digital era, a teacher working in higher education institute has to understand difference between “learning about” and “learning to be” and implement the later for the effective learning outcome among the learners. Proper involvement of the learner ought to be ensured in the discipline which is meant for learning to be—i.e. if a learner is enrolled in teacher education programme he should have direct exposure of teaching skills. The digital periphery can be accommodating to learner for the content exploration to work out lessons in a digital form and teacher’s role from technical to teaching point will be crucial. Teachers have to make the available support structures and systems for them to develop skills like interactive learning, collaborative learning and independent learning among the students. The teachers’ role expands to nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators. Teachers working in Indian higher education system have to manage the technologies and facilities available for effective teaching—Virtual laboratories, e-learning resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

A teacher equipped with digital command can nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators. It’s teacher’s role to expose the learner to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.). Teacher can play a pivotal role in preparing a complete repository comprising the details on the academic, personal and psycho-social support and guidance services (professional counselling/mentoring/academic advice) provided to students. Teacher ought to use e-library resources to augment the teaching-learning process.

It’s a vital function of techno-savvy teachers to empower and enable themselves as well as their learners for the use of various tools and technology for improved teaching-learning process. They should sharpen their skills in teaching learning methods/approaches compatible with digital technology. Content and knowledge management is a key knack for teacher to survive in digital environment. They have to select, develop, and enrich teaching-learning material in digital structure and with any-time anywhere mode. Now the teacher’s role has changed with the advancement of technology, the assessment of the students’ learning has transcended the four wall of class-room. As the learner gets information and knowledge through digital window; hence their assessment will have to be designed in that fashion only. Here teacher’s role is to collaborate with students as well as other mentor and teachers of the world. In this digital era, teachers’ role has shifted from mere preacher to the manager of students social and emotions behaviours; mentor for their learning and over-all development as a balanced citizen; motivator for slow learner and a fast learner in digital environment. He has to keep watch on the time spent by learners for their proper time management which make certain that the learner utilizes optimum e-recourse.

Many of the current, and certainly most of the next, generation of students who reach college age are remarkably immersed in technology, far more so than we or other members

of any older generation can likely fathom. Today’s digital kids think of information and communications technology (ICT) as something akin to oxygen: they expect it, it’s what they

breathe, and it’s how they live. They use ICT to meet, play, date, and learn. It’s an integral part of their social life; it’s how they acknowledge each other and form their personal identities. Furthermore, ICT to some degree has been supporting their learning activities since their first Web search and surf years ago.

Basic effects of digitalized environment on the teaching-learning process

Improving effect in terms of quality of student work and practical examples through visualization. Improves poor handwriting and languages skills through word processing. Facilitates self-pacing with increased capacities to deal with individual learning styles as students can work at the pace

and intensity suitable to their needs. Enables collaborative learning with little indication of the isolated learner. Encourages use of peer coaching and peer reviews.

Develops communication skills and awareness of different audiences. Impact on resource–based learning and access to real world information through the Web. Enhances information consistency and accuracy adding to authenticity of learning tasks, with pragmatic and advanced information. Augments learner motivation through practical activity, visual demonstrations and improved modes of presentation. Promotes independent learning and individual preferences for process, outline, method and design. Furnishes learners more control. Let's learners to produce high quality multimedia products. Transforms teacher practices, planning tools and assessment rubrics. Boosts opportunities for classes to advance and for learner experiences to shape results. Can inspire students to be committed to learning and to contribute in learning activities. Can develop students' higher-order thinking: their ability to apply knowledge and skills to analyze challenging problems, grasp broader concepts, and devise new ideas and solutions.

A teacher equipped with digital command can nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators. It's teacher's role to expose the learner to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc. Teacher can play a pivotal role in preparing a complete repository comprising the details on the academic, personal and psycho-social support and guidance services (professional counselling/mentoring/academic advice) provided to students. Teacher ought to use e-library resources to augment the teaching-learning process. It's a vital function of techno-savvy teachers to empower and enable themselves as well as their learners for the use of various tools and technology for improved teaching-learning process. They should sharpen their skills in teaching learning methods/approaches compatible with digital technology.

Conclusion

Learning technologies are not a panacea that will resolve the many issues that higher education faces today. Instead, new technologies lead directly to institutional issues, starkly highlighting them in contrast to the widespread need for education and the possibilities technology presents to fill that need. Higher education today has the opportunity to reshape itself and play an important role in the future of our society. The role is ultimately fulfilled will depend on fresh, creative thinking and a firm commitment to move teaching, learning, and the university into the digital age.

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22. ACHIEVEMENTS AND FUNCTIONS OF SEWA ACADEMY IN EMPOWERING SKILLED WOMEN IN THE DIGITAL ERA

Dr. V. THILAGAVATHY, UGC-DSRK Post-Doctoral Fellow, School of Education, Pondicherry University**.**

Introduction

SEWA Academy is the focal point for all of SEWA's training, capacity building, research and communication efforts. SEWA Academy functions as our member's 'UNIVERSITY', providing our members their first introduction to a formal learning environment. It is the organizational wing that is responsible for basic membership education and for capacity building, leadership training, communication and research.

A movement requires an ideological framework and a clear direction understood by all its members. All participants in the movement must have a common understanding of the vision and the strategy. Moreover, in a grassroots movement like SEWA, leadership cannot be imposed from above. It must blossom from below so that the organization can remain dynamic, effective, and unified. To evoke and inspire such grassroots leadership, education is fundamental. Besides education and capacity building, it is also important to understand the lives and work of self employed women and carry that understanding to the women themselves and to policy makers, activists, academics, and the general public. It is in response to these needs that the SEWA Academy was created in 1991.

Goals of SEWA Academy

SEWA Academy's primary objective is to take the SEWA movement forward. It does this in four ways - through training and capacity building, action-oriented research of its members, and by building strong communication channels, within the organization as well as with the outside world.

Training and capacity building represents SEWA's systematic efforts at enhancing the capacity of its members to achieve greater personal and organizational development. This enables them to participate more effectively in the processes of change. Membership education (including literacy) and leadership training courses are the heart of SEWA Academy. It also carries out many other educational programmes that reinforce the philosophy and principles of the SEWA movement.

Through research, the effort is to bring the self-employed women into the mainstream of the world of knowledge. Credible, scientifically based research has been a critical tool in SEWA's advocacy efforts. Its research is designed not only to clearly demonstrate the need for overall policy changes but also identify specific measures for implementation.

Communication is a very important aspect of poor self-employed women's lives and struggles. There is the need to develop and strengthen communication between members within the SEWA movement, and also between poor women and the world outside. Different media for communication are used by the women, so that they are both seen and heard.

Literacy Classes

The women participating in trainings provided by SEWA Academy were both literate and illiterate, from different areas of city and villages. The illiterate women articulated the words that "We would like to study"! With this SEWA members expressed their aspiration to educate themselves. SEWA member's enthusiasm led to initiation of Literacy Class in 1992. The members sought education, which was easy to understand and which would help them in life.

Class Details

The teachers are recruited from the community itself. Extensive teacher's training is imparted to them focusing on thorough development of women members. Monthly meetings are held for teachers and supervisors. The classes are arranged in the area either at the teacher's place, supervisor's place or at area center of SEWA. The duration of the literacy classes was 6 months, but as per the requirement the classes are arranged for 1 year. The class timings are as per the convenience of the women for 2 hours daily. The ratio of the class is 20 women per class.

Curriculum

Curriculum developed is specific to the needs of women. The celebrations are also a part of the curriculum. Days like Women's Day, Teacher's Day, Literacy Day, Gandhi Jayanti, etc. are celebrated. Cultural programmes, exposure visits, summer camps, sports day celebration, etc. form an integral part of the curriculum.

Akashganga

Akashganga is a magazine for the young girls initiated by SEWA Academy. The women attending literacy classes expressed the need for Akashganga Club for their daughters. Akashganga club is run on every Saturday for 2 hours. During these 2 hours, young girls read books, narrate stories, jokes and riddles.

Cultural Programmes

Cultural programmes are organized to present the talent of community women and girls. The women and girls, who have never been to a community hall or seen stage, participate enthusiastically. Thematic skit, folk dance Garba and Raas, adivasi dance, role play, folk music, etc are integrated in cultural programme. The cultural programme facilitates imparting important social message in subtle way.

Literacy Classes from 1992 to 2015

Year	No. of Classes	Women Members	Teachers
1992	2	30	1
1993	14	278	6
1994	56	850	28
1995	101	1515	51
1996	108	1620	54
1997	54	810	27
1998	93	1395	42
1999	78	1170	40
2000	111	1665	83
2001	155	2325	76
2002	155	3168	103
2003	70	1400	70
2004	93	1395	60
2005	68	1020	52
2006	58	1160	55
2007	52	1040	51
2008	200	3028	132
2009	90	1715	90
2010	175	3500	175
2011	175	3500	175
2012	165	3303	165
2013	120	2411	120
2014	82	1991	82
2015	35	875	35
TOTAL	2,310	41,164	1,773

Skill Education and Communication Centre

The women and adolescent girls associated with SEWA Academy engaging in different trades expressed their desire to augment their skills, which helps them get better employment opportunities. Considering this, SEWA Academy initiated Skill Education and Communication Centre in 2008. The Centres are initiated in community areas to facilitate women to save on time and transportation cost. The centre helps women lead towards self-dependence and their proficiency improves. The vocational skills like computer, embroidery, tailoring, readymade garments stitching, bead work, electric work, beauty care, yoga, khatla work, hair brooch making, etc are imparted at the centre.

Skill Education and Communication Centre from 2008 to 2015

Year	No. of Classes	Women Members	Teachers
2008	17	306	17
2009	13	291	13
2010	10	197	10
2011	48	928	48
2012	58	1225	58
2013	27	555	27
2014	23	558	23
2015	28	568	28
TOTAL	224	4,628	224

Awards of SEWA

The biggest reward of SEWA Academy comes from its members. But some of the awards won by SEWA Academy are mentioned below:

- SEWA Academy received UNFPA 'The Laadli Media Awards for Gender Sensitivity 2010-11 (Western Region)' in the Special Award category 'Efforts to empower women through media'. The award was presented on 19 December 2010 at MICA, Ahmedabad.
- Video SEWA won Feldafest award (for uneducated women's efforts in video) in Germany, 1989.
- Video SEWA's film on women's empowerment 'A Women's Alternative' was selected for Festival International De Films De Femmes in Paris, 1992.
- 'A Journey from Rs 7 to Rs 4 lakh' – won international recognition at the UN Women's Conference in Beijing, 1995.
- Video SEWA clips have been used by private serial producers and BBC for broadcasting.
- Video SEWA's 'My Life, My Work' won the Social Documentary Award at the Guidonia Film Festival in Guidonia, Italy, 2007. Of 310 entries, 13 films were chosen. Video SEWA team received the award from the Mayor, and offered gratitude and appreciation.

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23. COMPUTER BASED SKILL TRAINING TO THE MARGINALISED SECTIONS OF THE SOCIETY IN THE DIGITAL ERA

Dr. B. MOHAN KUMAR, UGC-DSRK Post-Doctoral Fellow, School of Education, Pondicherry University,

Introduction:

India has the highest number and greatest diversity of grassroots Information and Communication Technology (ICT) initiatives in the developing world. There are a huge number of ICT projects and community centers in rural India for development purposes. And over half of the world's ICT kiosk initiatives are located in India (Sood, 2003). Not only that but India is ahead of other developing regions when it comes to ICT initiatives in rural areas. One of the most pioneering works in this area is a research experiment on "Minimally Invasive Education" (MIE) or "Hole in the Wall project" initiated by Dr. Sugata Mitra, Chief Scientist, CRCS, NIIT Ltd. (Mitra 2000, 2003; Mitra and Rana, 2001).

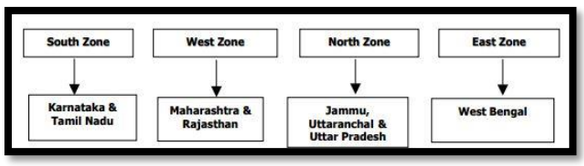
The Education for All movement took off in 1990 at the World Conference on Education for All. Since then, governments, non-governmental organizations, civil society, bilateral and multilateral donor agencies and the media have taken up the cause of providing basic education for all children, youth and adults. Around 83 countries are on track to achieve Education for All (EFA) by 2015. However, according to the 2002 Report, 28 countries, accounting for over 26 percent of the world's population, may not achieve any of the three measurable Dakar goals i.e. universal primary education (UPE), gender equality and the halving of illiteracy rates. Two-thirds of these countries are in Sub-Saharan Africa and Asia, which includes India as well.

The hole in the wall project:

The first experiment was conducted in 1999, when one PC was embedded in a wall facing a slum in New Delhi to observe what children would do with it. Mitra (1999; 2000, 2001, 2003) hypothesized that "groups of children when provided appropriate resources will attain computer literacy with minimum intervention". The three-year nationwide research program in India proved that groups of children can learn to operate computers with no adult intervention. Observations, anecdotes from community members indicated that a lot was happening as a result of the nature of the MIE learning stations. Teachers and Principals commented that children were performing better in schools and they attributed it to the learning stations. An MIE learning station has been designed such that computers are accessible from outside through holes in the wall. The present paper is about Zonal findings in India wherein MIE learning stations have been installed. It is also worth investigating findings at the National level (though not covered in the current paper but analysis is in progress).

Research design:

The current design covers 4 Zones: South, North, East and West Zone:



There are 17 sites where these MIE learning stations are operational. Out of the 17 sites, some sites have Internet connectivity while others have offline content. Offline content are freeware educational and fun games (science/ English/math/puzzles/quizzes etc.). Sample: Sample size of experimental group = 250 and control group = 119 children. Experimental group consist of children in the age range 8-14 years (boys and girls), going to Government schools and are exposed to the MIE learning stations. While, control group consists of children falling in the same age range; belonging to the same socioeconomic strata as the experimental group. The only difference being that they are not exposed to MIE learning stations. In this study, the dependent variable is the MIE Learning Station hence, any significant change in the performance of the experimental group can largely be attributed to the impact of MIE learning stations.

Tools used

a) **Computer literacy**: Icon Association Inventory (IAI) is used to assess the level
of computing skills that children have achieved.
b) **Intellectual Maturity:** The Draw a Man test has been used to assess the child's
intellectual maturity.
c) **School Academic performance:** The school academic performance is measured
by the aggregate percentage marks obtained by the experimental and control
group children in their school examination.
d) **HiWEL English and Math test:** These are two standardized tests developed in-house for English and Math.

Digital Literacy to Empower Urban Slum Children in India

The project aims to purchase 20 new computers to re-equip 2 computer training centers in Malviya Nagar & Jagatpura, Jaipur, which provide computer based education to primary & middle school children from socially and economically backward migrant families from some of Jaipur's urban slums. It also provides computer skills training to youth to increase their employability. This we believe can help them live a life of dignity & confidence and help arrest the problem of unemployment in our country. Digital literacy Project has given access to computer literacy, usage and technology familiarity among underprivileged children. Also, it has empowered youths with necessary skills in the workforce enabling them to increase their employability.

Results

The results are based on nine-month research period at each zone. And is in the following sequence: Performance in icon test & the learning curve [measure of computer literacy] followed by results on intellectual maturity and academic results, respectively. Graphical representations are only shown for sites where the experimental & control group are at par with each other at the beginning i.e. baseline. Any difference in the post phase can then be attributed to the MIE learning stations. However, there are cases where the experimental & control group differ significantly from the beginning and hence, have not been reported in this paper. I have also not reported those cases wherein, no significant difference is observed in the beginning and on the 9th month (end of the research period) for experimental and control group. Zone-wise comparison between experimental & control group for each test has been studied. Again, only those cases have been touched upon where both experimental & control group were similar in the beginning. I will take this opportunity to state that in cases where they are significant difference between the two groups to start with (baseline).

Challenge

The existing computers at the facility have become too old and slow, thus making it impossible for students to avail their facilities and making it difficult to conduct regular classes on computer basics and use of Internet and email. The computer learning center also serves as a skills training lab for several youth of the area to get basic and advance computer skills to increase their employability. The defunct computers with their faulty machinery have also hindered their skill development.

Solution

Re-installation of a computer lab will provide the means to offer vocational training, and a stronger education through access to the internet. Through these computer learning centers.
we can: A). Provide Computer based skills training to close the digital divide in the community and help youth, in finding jobs. B). Augment learning capacities of children by persistent access to the web. C) Train the teachers at the centers by using computer instruction modules.

Long-term Impact

We hope to provide children from disadvantaged background an opportunity to benefit from the technological tools available. The potential long term impacts are: Improved learning experience for students leading to improved performance, accruing computer education, enhanced job prospects and prospective employment based on skills learnt at the centers. The aim is to create digitally savvy, confident young individuals who have access to computer literacy & other broader learning opportunities.

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24. BASIS OF LEARNING IN DIGITAL ERA

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Abstract

Today, more than ever, the role of educational technology in teaching is of great importance because of the use of information and communication technologies. With the help of various applications for distance education, the internet, teachers and student themselves; they see the advantages of educational technology. In this paper deal with how the technology influenced in the teaching learning process, and what is the role of technology in education and process of learning. New methods and web portal-how these connected to the learning process, how these will help to our present educational system, and impact of the day to day life among the overall students, teachers, community etc.

Introduction

In the 21st century, technology has changed the ways in which we communicate and go about our lives. Very few educators would disagree with the notion that technology has dramatically changed the teaching and learning process. Technology has impacted almost every aspect of life today, and education is no exception. The teacher lectures from a podium at the front of the room while the students sit in rows and listen. Some of the students have books open in front of them and appear to be following along. A few look bored. Some are talking to their neighbors. One appears to be sleeping. Classrooms today do not look much different, though you might find modern students looking at their laptops, tablets, or smart phones instead of books (though probably open to Facebook). A cynic would say that technology has done nothing to change education.

However, in many ways, technology has profoundly changed education. For one, technology has greatly expanded access to education. In medieval times, books were rare and only an elite few had access to educational opportunities. Individuals had to travel to centers of learning to get an education. Today, massive amounts of information (books, audio, images, videos) are available at one's fingertips through the Internet, and opportunities for formal learning are available online worldwide through the Khan Academy, MOOCs, podcasts, traditional online degree programs, and more. Access to learning opportunities today is unprecedented in scope thanks to technology.

Technology is a powerful tool that can support and transform education in many ways, from making it easier for teachers to create instructional materials to enabling new ways for people to learn and work together. With the worldwide reach of the Internet and the ubiquity of smart devices that can connect to it, a new age of anytime anywhere education is dawning. It will be up to instructional designers and educational technologies to make the most of the opportunities provided by technology to change education so that effective and efficient education is available to everyone everywhere. **Technology** can be used to enhance critical thinking and critical literacy skills.

Learning

1. According to behaviorists, a relatively permanent change in behaviour that results from experience.
2. According to cognitive theorists the process by which organisms make relatively permanent changes in the way they represent the environment because of experience. These changes influence the organism's behaviour but do not fully determine it.

Gardner Murphy: "the term learning covers every modification in behavior to meet environmental requirements**"**

Henry P. Smith: "learning is the acquisition of new behavior or the strengthening or weakening of old behavior as the result of experience**".**

Woodworth: "any activity can be called learning so far as it develops the individual- (in any respect, good or bad) and makes him after behavior and experiences different from what that would wise have been**".**

Kingsley and Garry: "learning is the process by which behavior (in the broader sense) is originated or changes through practice or training**".**

Crow and Crow: "learning is the acquisition of habits, knowledge and attitudes. It involves new ways of doing things, and it operates on an individual's attempts to overcome obstacles or to adjust new situations. It represents progressive changes in behavior it enables him to satisfy interests to attain a goal**".**

The above definitions reveal the following facts about the meaning and nature of learning.

- Learning is a process and not the product.
- It involves all those experiences and trainings of an individual (right from his birth) which helps him to produce change in his behaviour.
- Learning leads to bring changes in the behaviour but it does not necessarily mean that these changes always bring improvement or development in the positive direction. One has equal chances to be drifted to the debit side of the human personality.
- Learning prepares an individual for the necessary adjustment and adaptation.
- All learning is purposeful and goal-oriented. In case there is no purpose, there would definitely be hardly any learning.
- The scope of learning is too wide to explain in words. It is a very comprehensive process which covers nearly all the domains-conative, cognitive and affective of human behaviour.
- Learning is universal and continuous. Every creature that lives learns. In human beings it is not limited to any age, sex, race or culture. It is a continuous never ending process that goes from womb to tomb.
- Learning does not include the changes in behaviour on account of maturation, fatigue, illness or drugs, etc.

Learning is a process which brings relatively permanent changes in the behavior of a learner through experience or practice.

Digital World

Digital world means inter connected through digital devices, media or we can say digital marketing services that are available to everyone 24/7. It is the world full of ideas, opinions, learning and opportunities. The Internet has made it possible for all of us to connect whenever we consider it necessary.

Digital technology is a type of transfer that involves breaking a message or form of communication between two machines down into binary code. Binary code consists of all ones and zeros and can be reassembled upon being read by another piece of equipment that utilizes digital technology. This is a contrast to other, older types of technology that used other forms of information transfer and couldn't move data as quickly.

Digital technology uses digital code to transmit signals and information between different devices. This can be done with things like television programs or human voices. The data is converted into strings of ones and zeros and moved quickly to the next machine, where it is converted back into media form. In older forms of technology, like analog technology, this was done with pulses of electricity. However, analog systems often face size and speed limitations that digital technologies do not.

One of the most prolific uses of digital technology comes in the form of the popular cell phone market. Cellular phones utilize digital technology to transmit voices and other types of information. This type of digital technology has also been used in incremental stages along the way, such as cordless phones with good quality.

Digital learning is any type of learning that is facilitated by technology or by instructional practice that makes effective use of technology. Digital learning occurs across all learning areas and domains. It encompasses the application of a wide spectrum of practices including:

- Blended and virtual learning
- Game-based learning
- Accessing digital content
- Collaborating locally and globally
- Assessment and reporting online
- Active participation in online communities
- Using technology to connect, collaborate, curate and create.

Digital Assistive Technology

Assistive technology (AT) consists of any equipment or adaptive device that enable a person with a disability to access a range of functional activities (communication, play, academic work, leisure) e.g. specialist seating, an adapted laptop, mounting devices, specialist mice and keyboards, switches, environmental controls, etc. Assistive technology can't "cure" learning and attention issues, but it can help kids work around their challenges. These tools can help them work around their challenges while playing to their strengths. This helps them become more successful, productive students. At the same time, their confidence and independence can grow. Digital assistive technology service supports children and young people who require communication aids and/or technology equipment to facilitate participation in communication, learning and play activities, also including recording work effectively in the classroom.

In today world, computer-based technology is not a frill, but an important component of any modern curriculum. The term "technology' can be used to mean a very wide variety of things, from computers to pencils. In order to understand the impact of technology on education, it is helpful to consider the purposes to which technology is applied. When students are learning "from' computers, the computers are essentially tutors. In this capacity, the technology primarily serves the goal of increasing students basic skills and knowledge. In learning "with", by contrast,

students use technology as a tool that can be rather than serving simply as an instructional delivery system.

Students use the technology as a resource to help them develop higher order thinking, creativity, research skills, and so on. Generally, more advanced technology is involved in learning "with". These factors, which repeatedly appear in the literature as crucial elements for successfully using technology, include the following:

- ✓ Technology is best used as one component in a broad-based reform effort.
- ✓ Teachers must be adequately trained to use technology.
- ✓ Teachers may need to change their beliefs about teaching and learning.
- ✓ Technological resources must be sufficient and accessible.
- ✓ Effective technology use requires long-term planning and support.
- ✓ Technology should be integrated into the curricular and instructional framework.

Role of Technology in Learning

Technology can play a traditional role as a "delivery vehicles for instructional lessons" or in a constructivist way as "partners" in the learning process. Technology as tool to support to knowledge construction: for representing learners' ideas, understanding and beliefs and for producing organized, multimedia knowledge bases by learners. Technology as information vehicles for exploring knowledge to support learning- by- constructing: for accessing needed for information. For comparing perspectives, beliefs and world views. Technology as a social medium to support learning by conversing.

Increased Online Access and Connectivity

Internet technology has changed the life of the human beings to the great extent. The implication of internet technology in classroom removes much of the barriers lies between the teacher's delivery and students' understanding. Increasingly, organizations are adopting online learning as the main delivery method to train employees. At the same time, educational institutions are moving towards the use of internet for delivery, both at campus as well as at a distance.

Benefits of online learning

- ➢ For learners online learning requires no time zones.
- ➢ Locations and distance are not the issues.
- ➢ In asynchronous online learning students can access the online materials at any time, while synchronous online learning allows for real time interaction between the students and the instructor.
- ➢ Learners can use the internet to access up-to-date and relevant learning material.
- ➢ Can communicate with the experts in the field in which they are studying.
- ➢ For people with disabilities, broadband is a flexible and adaptable tool that is being used to deliver affordable, convenient, and effective services.
- ➢ Broadband makes new services available to people with physical disabilities, such as attending classes remotely, eliminating the need for unnecessary or difficult commutes or trips.
- ➢ Programs that read text and describe visual contents aloud in a synthetic voice or a Braille display enable people who are blind or visually impaired to search the Internet, understand videos, and communicate online.
- ➢ Internet facility in public libraries helps students to explore the world around them and senior citizens to know about health care.
- ➢ Librarians use broadband for business functions, such as running online catalogues, managing digitized content and serving patrons through e-mail and online reference.
- ➢ Enhances the quality and effectiveness of instruction and improving the delivery of education for teachers.
- ➢ Makes the class more interactive by the use of more interactive tools in the class like wikis, blogs, podcasts, web 2.0, etc.
- ➢ Improve the monitoring and management of student progress and achievement.

As the Federal Communications Commission observed, "digital literacy is a necessary life-skill, much like the ability to read and write."

Internet and Education

Educational technology and the Teaching/ Learning process

- ➢ **Class website:** through class website, the student's work is displayed; teachers can post homework assignments, student work, famous quotes, trivia games etc. Students may eventually become authors once they focus on contributing actively to the content of the website.
- ➢ **Wikis:** Wikis, like Wikipedia, is a group initiative that allows multiple members of the group to edit a single document and create a truly collaborative and carefully edited finished document.
- ➢ **Google** is one of the smartest search engines. Google was originally created by Stanford University students Sergey Brin and Larry Page, and retains a well thought out structure and methodology. Google uses a page ranking system to determine which sites are returned at the top in response to a search query.
- ➢ **Yahoo** Yahoo is the oldest and best directory search site. David Filo and Jerry Yang were Ph.D. candidate in Electrical Engineering at Stanford University when they started Yahoo to keep track of the web sited they were interested in. by 1994 their site was being used by thousands of users who needed a way to find content on the Internet and so they turned it into a general purpose index for anyone that wanted to use it.

- **Mobile devices:** mobile devices such as Smartphone, digital cameras, video cameras, interactive whiteboard tools, document cameras, or LCD projectors have proved indispensable for better learning environment. These are used to enhance the learning experience in the classroom by providing the possibility for teachers to get instant feedback.
- **Electronic portfolios:** An electronic portfolio, also popularly referred to as "multimedia portfolio, e-folio, web folio", which are similar to paper portfolio. It is the combination of media tools such as audio or video recordings, multimedia programs, database, spreadsheet and word processing software as well as CD-ROMs and the world-wide-web (www) with hyper-media links. The objectives of the course and program schedule will determine the extent and depth of coverage of these tools.
- **Browsing** Browsing is a process of surfing or navigating the internet for the required information. The software used for browsing the web pages is called a browser.

E-mail

- E-mail (electronic mail) is transfer of mail from one computer to another. It is an important and famous facility provided by internet. Internet user mostly uses this facility.
- Educators, teachers, researchers, students, educational institutions and administrators make use of it for the following advantages.
- A message can be sent to many people at once.
- It has the speed of telephone without requiring that both parties be available at the same instant.
- It also leaves a written copy of the message that can be filed or forwarded.

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25. ROLE OF ICT IN EDUCATION

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Abstract

Today rapid advancements are being made in the field of education. Many advanced tools like e-learning, smart classes, Educomp etc., has been introduced. Technology is also changing classroom experiences. One a can sustain oneself only if he/she is equipped with digital technologies. I have discussed about smart classes, its needs, merits and demerits. And let us see the role of teachers and learners in the digital world. At present smart classes preferred to a greater extent by the parents.

Key words: Technology, smart class, merits, demerits ad etc.

Introduction:

India has made impressive strides in the application of information and communication technology in recent years and this is reflected in a vibrant and fast growing economy. It is now an acknowledged world leader in the knowledge industry. Today, all our activities are becoming highly knowledge based. There is a shift from the industrial era to the informational era. Globalization, liberalization and a market oriented economy have added new flavor to our activities, with the result that knowledge and skills of every professional, including teachers needed to be continuously updated. Globalization has created an environment to make a close network between individuals, groups, institutions, and organizations around the world. Sharing the views and ideas and acquisition of knowledge on the newer field has become inevitable. The wheels of "Education providers" have been geared according to the vibrations of the technological advancement and hence the teaching learning atmosphere takes up newer dimensions every now and then.

Information and Communication Technology (ICT):

ICT is a generic term referring to technologies, which are being used for collecting, storing, editing and passing on information in various forms. Information and Communication Technologies, (ICT's) are one of the major contemporary factors shaping the global economy and producing rapid changes in society. ICT have fundamentally changed the way of learning, communicating, and business. ICT can transform the nature of education, where and how learning takes place and the roles of students and teachers in the teaching learning process. ICT have the potential to enhance access, quality and effectiveness in education in general and to enable the development of more and better teachers in particular. A personal computer is the best known example of the use of the ICT in education, but the term multimedia is also frequently used. Multimedia can be interpreted as a combination of data carriers, for example video, CD-ROM, Floppy disc and internet and software in which the possibility for an interactive approach is followed.

Functions of ICT in Education

1) ICT as object, it refers to learning about ICT, mostly organized in a specific course. What is being learned depends on the type of education and the level of students. Education prepares students for the use of ICT in education, future occupation and social life.
2) ICT as an 'assisting tool'. ICT is used to as a tool, for example, while making assignments, collecting data and documentation, communicating and conducting research. Typically, ICT issued independently from the subject matter.
3) ICT as a medium for teaching and learning. This refers to ICT as a tool for teaching and learning itself, the medium through which teachers can teach and learners can learn.
4) ICT as a tool for organization and management in schools

Smart class

The New Learning Environment in Classroom with the ICT as a fundamental platform let us discuss in detail about one of its essential ingredient. It is a new vision in education. The use of Education technology can bring a huge change in education. Internet and e learning devices can make class room environment extremely amazing. Teaching through computer, internet and multimedia devices will be a common thing in future. Now a day's different multimedia lessons are available. By using these multimedia lessons teachers may teach the students very easily. Several institutes are making their classroom smart and modern. They are working on "Smart School Project". In modern e learning and online education based system, the smart class and smart school are not an unknown thing, because in a smart class there will be computer enabled education system. Smart class provides a platform for online e class. We can say it "White Board E Evolution" in education. The question is that what is smart school and what is smart class and what is smart class education. There is a question also "What is smart school management system?".

Now blackboard and chalks is replacing by white board, projectors and the pointer. Really it is an amazing than traditional teaching learning system. Smart class is a class of modern age. There will be fully multimedia enabled audio-visual classrooms in a smart classroom. It will be quite different than traditional class. In a smart classroom the teacher works as a facilitator in learning.

Innovative classroom learning:

In a smart class there will be computers, projectors, internet connectivity and other multimedia devices such as home theater etc. The role of a teacher may be modified in such new environment. In a smart class student may use internet and this activity can change the old thinking about the students and the learning theory. In beginning, it should be launched as a pilot project in a few schools. The experience and result of these schools leads the future planning. To make a new project in smart school vision, it is very important to invite the expert teachers to play a great role in policy making.

Methods of smart classroom teaching

There are several innovative and smart teaching learning methodologies to make our classroom smart, active, innovative and interesting.

Active learning methodology:

Active learning methodology is an active methodology for teachers. In A.L.M. there are main focus on the student's activity and group activity. Teachers have to help the students to learn. Now teacher's role is changing in learning. Teacher is as a facilitator in learning.

Smart learning:

Smart learning is the new vision in education using computer, internet and multimedia in classroom teaching. It is really a smart teaching learning way, because it is the teaching of the modern age. Smart learning introduces worldwide approach in our classrooms. Internet is the ocean of knowledge. Smart learning is a smart and innovative learning concept for smart teachers of a smart school. Smart learning gives unique learning opportunities to the students.

Activity Based Learning:

It is an active learning technique, useful in various subjects. It makes teaching learning more interesting. It is more useful in primary and Pre- primary classes. Activity Based Learning provides great opportunities to the students through interesting activities. It may be used in our day by day classroom teaching easily.

Smart Classroom in Educational Settings

Technology is changing the way life functions and if it's for the good, then why not go for it! Some students and teachers have problems with chalk dust and they tend to suffer from allergic reactions. The smart board saves you from such distress and won't let you develop any health

issues later. Smart boards are a lot smarter when it comes to field trips which are impossible with textbooks. A field trip to the deserts of Sahara or the rainforests of the Amazon basin becomes easy with visuals in the smart boards of smart classroom. These visuals are definitely more attractive than those descriptions in a few lines of a textbook. A classroom has students with varied power of understanding and learning, and studying from notes and other materials becomes difficult for some students. But the use of smart classes and modern technology eases the learning process for all students. Moreover, this kind of education in class promotes more interaction between teacher and student with more participation from both sides.

Advantage

Smart class use all interactive module like videos and presentations and these visually attractive methods are appealing to kids who are struggling with the tradition method of teaching in a classroom.

- Smart classes are like watching movie with visuals and animation to teach and explain a point.
- Visuals are very catching and easy for young children to relate with their lessons.
- Information is conveyed very fast and effectively with help of audio visuals in the classroom.
- It utilizes the time which was wasted before on diagrams and charts.
- Smart boards have all the information in their memory so that it can be repeated in the lecture as many time kids want.
- It also helps teachers and students who have allergic reactions from chalk dust. It saves you from distress and to develop any health issues later.
- Smart boards are more convenient for field trips than text books.
- Visuals are definitely more attractive than disruptions of anything in few lines. Moving visuals make things more attractive and appealing for the kids to learn.
- Smart learning makes students easy to learn and understand than making notes and learning them for hours and hours to understand.
- It promotes more interaction between teacher and student with more participation on both sides.
- It is perfect for all kinds of students of all age groups.

Disadvantage

- Some technical faults can arise during lecture which can interrupt the learning process. It is a common concern for those lobbying against smart class education.
- The costing factor also prevents some schools to adopt this technology. It comes with the problem of high cost of education.
- Maintenance
- Lack of Skilled faculty

Conclusion

The possibilities and advantage of smart classroom is endless and we can surely ignore the negativities. Adopting such a new concept can be a tough decision but it will surely make education more fruitful for young kids. It is a blessing because it makes studying more colorful and easy to learn. Teachers also enjoy this kind of education because student interaction becomes easier with a healthy classroom environment among all the students and teachers. Smart Class concepts need innovative and effective classroom management because it is the beginning of "21st century smart classroom.

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26. நவீன உலகில் கற்றல் மற்றும் கற்பித்தல்

கி.ச. புனிதவதி, உதவிப் பேராசிரியர், தமிழ்த்துறை, இராஜேஸ்வரி மகளிர் கலை மற்றும் அறிவியல் கல்லூரி, பொம்மையார்பாளையம்.

முன்னுரை

வாழ்க்கையைச் செம்மைப்படுத்துவதே கல்வி! காலந்தோறும் மனிதன் ஒன்றைப் பற்றிய முழுமையை அறிந்து கொள்ள **கல்வியறிவு** அவசியமாகின்றது. தற்காலத்தில் ஏற்பட்டுள்ள அறிவியல், தொழில்நுட்ப மாற்றங்களால் சமூகத்தை மேல்நோக்கி இட்டுச்செல்லும் இவ்வேலையில் அசிரியர் – மாணாக்கரிடையே நிலவும் கற்றல், கற்பித்தல் முறையை விளக்குவதே இக்கட்டுரையின் நோக்கமாகும்.

கற்பிக்கும் ஆசிரியர் நிலை

கற்பித்தலின் வாயிலாக மாணவர் புதியதைக் கண்டுபிடிக்கும் தூண்டுகோலாக ஆசிரியர் இருக்க வேண்டும். எப்போதும் மீனைப் பிடித்துத் தருபவராய் ஒருபோதும் ஆசான் இருக்கக்கூடாது. நல்ல சமூகத்திற்கான முன்னேற்றம் என்பது அடிப்படைக் கல்வியைப் பொருத்தே அமைகிறது. மாணவர்களுக்கு முன்மாதிரியாக விளங்கும் ஆசான் அவர்கள் மத்தியில் ஒன்றும் அறியாதவராய் இருத்தல் கூடாது.

பாடத்திட்டத்தில் மாற்றம்

- பல்கலைக்கழக அளவில் தற்போது நடைமுறையில் உள்ள பாடத்திட்டங்கள் அனைத்தையும் ஒன்றிணைத்துப் புதிய பொதுப் பாடத்திட்டத்தை உருவாக்கி, அனைவருக்கும் பயிற்றுவிக்க வேண்டும்.
- அனைத்துப் பல்கலைக்கழகங்களையும், கல்லூரிகளையும் இணையத்தின் வாயிலாக ஒன்றிணைத்து, அந்தந்தப் பாடங்களில் சிறப்புப் பெற்ற பேராசிரியர்களை நேரடிகற்பித்தல் வழி (Online Teaching) பாடங்களை நடத்த வேண்டும்.
- தேர்வுகள் நேரடியாக அனைவரும் பொதுவாக ஒரே நேரத்தில் எழுதி, ஒரே முறையிலான மதிப்பீட்டின் அடிப்படையில் மதிப்பெண்களை வழங்கித் தேர்வு செய்வதன் மூலம் வேலைவாய்ப்புகளில் சமமான அளவில் கல்வி, அறிவு சார் திறன்களைப் பெற்று (ஏற்றத்தாழ்வுகள் இன்றி) உயர முடியும்.
- ஒவ்வொரு கல்வி நிறுவனத்திலும் அதிநவீன வசதிகளுடன் கணினி மயமாக்கப்பட்ட ஆய்வகங்களை நிறுவி கற்பிக்க வேண்டும். பாடநூல்களைத் தயாரிக்க அரசின் மூலம் நியமிக்கப்படும் பாடநூல் வல்லுநர்களால் தயாரிக்கப்படும் பாடத்திட்டங்களை இணையத்தின் வாயிலாக வெளியிட்டு, பொது மக்கள், பிற கல்வியாளர்கள் கருத்துக்களைப் பெற்ற பின்னரே இறுதி செய்ய வேண்டும். இதனால் தரமான, தகுதியான பாடங்கள் மட்டுமே பாடநூல்களில் இடம்பெற முடியும்.
- பள்ளி, கல்லூரிகளில் அடிப்படை வசதிகள், உள்கட்டமைப்பு வசதிகளை மேம்படுத்த வேண்டும். இதனால் மட்டுமே சிறந்த, உயர்ந்த கல்வியை தரத்துடன் போதிக்க முடியும். தமிழ்மொமி மற்றும் இலக்கியம் கற்றல் கற்பித்தலில் மேற்கண்ட புதிய நடைமுறைகளையும், செயல்திட்டங்களையும் புகுத்துவதன் மூலம் தரமான கல்வியை வழங்கவும், நாடு சிறந்த முன்னேற்றத்தை அடைய முடியும்.

கற்பித்தலில் தகவல் தொடர்பு தொழில் நுட்பத்தின் பங்கு

தகவல் தொடர்பு நுட்பம், குறிப்பாக, கணினி மற்றும் இணையதளம் முறையாகப் பயன்படுத்தப்பட்டால், மாணவர்கள் மற்றும் ஆசிரியர்கள் இருவரும் பயன்பெரும் வாய்ப்பு உள்ளது.

இந்தப் புதிய முறை பாடம் கற்பித்தலில், ஆசிரியர்கள் மாணவர்களை மையப்படுத்தி கற்பிக்க வழிவகுக்கிறது.

ஆர்வத்தைத் தூண்டல்

ஆசிரியர்கள் - மாணவர்கள் தகவல் தொடர்பு தொழில் நுட்ப பயன்பாட்டின் மூலம், பல புதிய முறைகளில் தகவலைப் பயன்படுத்த மாணவர்களுக்கு வாய்ப்பு ஏற்படுகிறது. மனப்பாடம் செய்து படிப்பதைக் காட்டிலும், வாழ்க்கையில் சந்திக்கும் பிரச்சனைகளை எதிர்கொள்ளுதல், கற்றலை எளிமையாக்குதல், கற்போரின் வாழ்க்கைச் சூழ்நிலைக்கு ஏற்ப கல்வி அமைதல் ஆகியவை சாத்தியமாகும்.

குழுவாக பயிலுதல்

தகவல் தொடர்பு தொழில் நுட்பத்தைப் பயன்படுத்தி பயிலுதல் முறையானது, மாணவர்கள், ஆசிரியர்கள், வல்லுநர்களிடையே அவர்களுடைய இடம், தகுதியை கணிக்காமல் கலந்துரையாட ஊக்குவிக்கின்றது. பலவிதமான கலாச்சார பிரிவினரிடையே பழகுவதற்கு ஒரு வாய்ப்பை ஏற்படுத்தி கொடுக்கிறது. இதன் மூலம் கற்போரிடையே ஒருமித்த கருத்தும், தகவல் பரிமாறிக் கொள்ளும் திறனும் அதிகமாக உதவுகிறது. மேலும் கல்வி பயிலுதல் ஒரு காலகட்டத்திற்கு மட்டும் என்றில்லாமல், வாழும் காலம் முழுக்க தொடர்பணியாக மேற்கொள்ள உதவும்.

கணினி பயன்பாடு, இணையதளம், அது சார்ந்த தொழில் நுட்பங்கள் - ஆசிரியர் பயிற்சியும், படிப்பதற்கு உகந்த சூழலை உருவாக்கவும், உதவி செய்கிறது. மாணவர்கள் ஆசிரியர்களுக்கிடையே கருத்துப் பரிமாற்றம், கல்வி கற்றலில் நல்லதொரு மாற்றத்தைக் கொண்டு வரும் என கூறலாம்.

கணினி மற்றும் இணைய தளங்களின் பயன்பாட்டை கணிப்பதில் உள்ள ஒரு பிரச்சனை, கற்போரை மையமாக வைக்கும் கல்வி சூழலை பரிசோதிக்க, தற்போது நடைமுறையில் இருக்கும் அளவீடுகளால் முடியாது. அத்துடன் கற்கும் முறையோடு, தொழில்நுட்ப பயன்பாடும், ஒருங்கிணைந்து வருவதால், எந்த நுட்பம் சரியானது என்பதை கண்டுபிடிப்பதும் கடினம். கற்றலில் ஏற்படும் மாற்றத்திற்கு, தொழில் நுட்பங்கள்தான் காரணம் என்பதையும் முடிவு செய்ய இயலாது.

கற்பித்தல் & கற்றல் ஆசிரியர்களின் பங்கு

தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்தி கற்பிக்கும் ஆசிரியர்கள் வழிகாட்டிகளாக இருக்கும் வகையில் அவாகளுடைய பங்கு மாறியிருந்தாலும், வகுப்பறைத் தலைவராக செயல்படும் பங்கில் பெரிய மாற்றங்கள் ஏற்படவில்லை. எனினும் ஆசிரியர்களின் வழக்கமான தலைமைப் பாங்கு மற்றம் செயல்பாடுகள் குறிப்பாக பாடங்களைத் திட்டமிடுவது, தயாரிப்புப் பணிகள் செய்வது மற்றும் தொடர்ந்து கண்காணிப்பது ஆகியவற்றில் இன்றும் முக்கியத்துவம் உள்ளதாக இருக்கிறது.

தகவல் தொழில்நுட்பங்களைப் பயன்படுத்தும் போது பாடங்களைத் திட்டமிடல் மிகவும் அவசியம்

ஆசிரியர்கள், தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்தும் போது, பாடங்களைச் சரியாக திட்டமிடுதல் மிகவும் அவசியமாகும். அவ்வாறு செய்யாவிட்டால், மாணவர்களின் செயல்பாடு ஒருமுகப்படுத்தப்படாமல், முடிவுகள் எதிர்பாத்த அளவில் இல்லாத கூழல் ஏற்படும்.

கற்பித்தல் முறை

தொழில் நுட்பங்களை அறிமுப்படுத்துவதால் மட்டுமே, கற்பித்தல் - கற்றல் சூழ்நிலையை மாற்ற இயலாது.

தகவல்தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்துவதால் மட்டுமே கற்பித்தல் முறைகளை மாற்ற இயலாது எனினும், ஏதுவான வாய்ப்புகள் இருக்கும் நிலையில், தங்கள் கற்பிக்கும் முறைகளை மாற்றியமைத்துக் கொள்ள அவை ஆசிரியர்களுக்கு உதவும். ஆசிரியர்களின் கற்பித்தல் முறைகள் மற்றும் காரணவியல் அறிவு, தகவல்தொடர்பு தொழில்நுட்பங்களை ஆசிரியர்கள் பயன்படுத்தும் விதம் ஆகியவை மாணவர்கள் கற்றலில் பெரும் தாக்கத்தை ஏற்படுத்தும்.

கற்போரை மையப்படுத்திய கல்விச் சூழலை உருவாக்க ஆசிரியர்களுக்கு உதவக்கூடிய கருவியாக தகவல் தொடர்பு தொழில்நுட்பங்கள் காணப்படுகின்றன.

பொருளாதார ஒத்துழைப்பு மற்றும் மேம்பாட்டுக்கான நிறுவன (OECD _ Organization for Economic Co-operation and Development) உறுப்பு நாடுகளில், தகவல் தொழில்நுட்பங்கள் உதவியுடன் மாணவர்களின் புரிதல் மற்றும் சிந்தனையை, முழு வகுப்பு அல்லது சிறு குழு விவாதங்கள் மூலம் சீர்படுத்துவதே, தகவல் தொடர்பு தொழில்நுட்பங்களின் சிறந்த

பயன்பாடு என்ற ஒத்த கருத்து நிலவுகிறது. ஆசிரியரை மையப்படுத்திய முறைகளிலிருந்து, கற்போரை மையப்படுத்திய கல்வி முறைகளுக்கு மாறும் முயற்சிகளை ஊக்குவிப்பதாகவும், ஆதரிப்பதாகவும் தகவல் தொடர்பு தொழல்நுட்பங்கள் கருதப்படுகின்றன.

தொழில்நுட்ப பயன்பாட்டில், ஆசிரியர்களை விட மாணவர்கள் அதிக திறனுள்ளவர்களாக இருக்கிறார்கள்

OECD உறுப்பு நாடுகளில், மாணவர்கள் மற்றும் ஆசிரியர்களிடையே நிலவும் தகவல் தொடர்பு தொழில்நுட்ப அறிவு மற்றும் பயன்பாட்டுத் திறனில் அதிக வேறுபாடுகள் நிலவுவதாகத் தெரிகிறது. கற்பதில் தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்துவதில் மாணவர்களிடையே நிலவும் குறைபாடுகளுக்கு, ஆசிரியர்களின் அனுபவங்கள் மற்றும் திறன் குறைபாடுகள் காரணமாக இருக்கக்கூடும் என்பது இதன் மூலம் தெரிகிறது.

முடிவுரை

சமூக முன்னேற்றத்திற்கான அடிப்படைக் காரணி, கல்வி அக்கல்வி நவீன உலகில் ஏற்பட வேண்டிய கற்றல், கற்பித்தலின் மாற்றத்தினைக் குறித்தே இக்கட்டுரையில் எடுத்துரைக்கப்பட்டுள்ளது

27. TECHONOLOGY MEDIATED LEARNING

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Abstract

Technology Mediated Learning (TML) is an umbrella term, incorporating different approaches to digitalize in learning and teaching. This study aims at an analysis of professional development through online so as to bring out the technology mediated learning. This present paper provides an overview of the available tools and their effective use. Technology provides limited application to their everyday world of teaching and learning. Digital technology tools that enables design, media production, self-expression, research, analysis, communication, collaboration. Furthermore, goals for improved educational achievement and increased participation.

Introduction

Technology Mediated Learning (TML) is an umbrella term, incorporating different approaches to digitalize in learning and teaching. This paper advocates the professional development through online can be developed if teachers in the classroom use technology integrated collaborative methodology guided by a constructive framework. Some of the skills deals with teacher development online and the growing area of online teaching itself. This section looking at online communities which deals with teacher training and development in technology at a selection of opportunities for teaching online, and at a collection of resources to further knowledge base. From these huge opportunities, we can brief about the development through online.

There are plenty of opportunities for developing teachers work through the techniques in book, which deal not only in the theory, but also with the practical applications of technology in the classroom.

The Internet

There are many advantage of using the internet in our language classrooms, especially in learning. First of all, we should think of the internet as a vast, medium, and comparable in some ways to books, audio & video material. These resource can be available both to the teachers and students at the internet connectivity. Secondly, we also must think about what types of language students need to learn in order to communicate effectively via computer. A generation ago, students learnt to write essays and read magazine articles.

By using new technologies in the language classroom, we can better prepare students for the kinds of international cross-cultural interactions which are increasingly required for success in academic, vocational, or personal life.

Listserv

Listserv can be useful to teachers for their professional development. Listserv is an automatic mailing list server developed by Eric Thomas in 1986. “List” plays a vital role in professional development. When an e-mail is addressed to a listserv mailing list, it is automatically broadcast to everyone on the list. A listserv has an electronic mailing list for a specialist subject. The list is basically a collection of people interested in a particular subject who communicate with each other by email on a daily basis. A listsrev handles all communication among the subscribers.

Joining a listserv effectively places in the biggest teachers’ room in the world, with thousands of colleagues to talk to all the time. An enormous archive of past discussions and files on the subject can be requested and received by email. Subscribers control their own subscribing and removal, postponing and resuming of mail.

Smart Board

The smart board can be a successful tool in the language classroom when the teacher plans and organize the lessons very well. Along with the smart board, pre-recorded lessons and worksheets in spelling, pronunciation, structures, grammatical categories, songs and poems, stories, language usage, etc. have become available. The language teacher at primary and secondary levels can use these materials with confidence. However, too many visuals

should not be used. The smart board as a tool should be used only moderately in our language classroom to derive maximum benefit out of it.

The teacher at the primary level, who teaches a second language, will find the Interactive White Board (IWB) a boon. He/she can now spend less time at the photocopier and more time preparing her whiteboard screens to take into class. However, the screens can be reused. Moreover, plenty of ready-made materials designed specifically for IWB are available from the major ELT publishers.

Discussion Lists and Internet Forums

Discussion lists are an effective and widely used platform for interaction among groups of people, providing opportunities for collaboration, information sharing, forming virtual communities. Discussion lists facilities information and expertise sharing, form collaborative work groups and build online communities. In language learning activities, teachers come out with their expertise and share their experiences. Students can also join these lists and take part in interaction. Internet forum or Message Board is a similar discussion and read and respond to posts by other forum members. Language teachers and learners can join a forum focused on language learning and get enriched.

Web Quests

According to Benie Dodge, a webQuest is "an inquiry oriented activity in which some or all the information that learners interact with comes from resources on the Internet." These can be created using various programmes, including a simple word processing document that includes links to websites. Students not only collate and organize information they have found on the web; they orient their activities towards a specific goal they have been given. A web quest is classroom- based. It emphasizes such higher order thinking as analysis, creativity and criticism. The teacher pre-selects the source, emphasizing information use rather than information gathering.

Community of Practice (COP)

A 'Community of Practice' is a group of people who share an interest in something, and come together to develop knowledge around this topic, in order to use it in practice. The term was coined by Etienne Wenger, an educational theorist and practitioner of Switzerland. It contains three crucial elements: knowledge domain which is the common topic binding the group together. Community creating the social fabric for learning on the topic. Practice which is the specific focus around which the community develops, shares and maintains its core of knowledge. An online COP generally starts as a small website, with members using various modes of communication and knowledge sharing tools. It has leader motivating the group and keeping it alive. Core members contribute regularly to the group. This is an excellent site for the professional development.

Online Teaching

The basic equipment required for teaching or learning online are a personal computer, headset with microphone, a web cam, and high-speed internet connection. Teaching by telephone is another way can teach students. Troubleshooting skills are good to have in case students experience technical difficulties during the lesson. Some companies have IT personnel on-hand to help with any connection issues that may arise, freeing the teacher to continue the lesson with as little interference with the lesson as possible. Students of online courses in ESL are teenagers, university students, stay-at-home parents, working professionals, or any of a number of people around the world who want to learn. Many of them prepare for TOEFL, IELTS or other examinations conducted by the universities aboard.

Conclusion

This paper focused and discussed activities which can be used for learning and teaching through internet. Our vision for the future of curriculum and pedagogy rest in focusing on the deeper learning of core skills and knowledge that will bring higher levels of achievements for all students. By generating a syllabus and planning a course around the web, it can easily prepare a useful, stimulating and rewarding study plan. Naturally, the search, evaluation and preparation skill will help with this process, but it is worth bearing in mind that plenty of materials have already been designed and are available online —from free lesson plans to commercial sites with a wide variety of content.

Learning space of the future will allow students to interact with each other across continents, go on field trips around the world facilitated by augmented and virtual realities, and integrate learning into their everyday lives by using ubiquitous tools. The use of TML in professional development and area studies, is still being actively researched and as a result, it is not yet possible to define best practice in this area. Finally, however, as the characteristic of different electronic media – and thus their application to learning and teaching – become clearer, a socio- cultural, constructivist model of learning is emerging. This concentrates on the possibilities for communication between human beings offered to language learners by new technologies.

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28. LEARNING IN THE DIGITAL WORLD

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Abstract

Digital learning is also called E-learning which means electronic learning. Electronic learning means leaning through an online. Online learning is helpful to the student's education to achieve their goals. Online learning gives time management to the students.

Introduction

The process of receiving or giving systematic instruction, especially at a school or university. The act or process of imparting or acquiring general knowledge developing the powers of reasoning and judgement and generally of preparing oneself or others intellectually for mature life.

Definition

The knowledge and development resulting from an educational process.

The field of study that deals mainly with methods of teaching and learning in schools.

Education in the digital world

Education for a digital world contains comprehensive collection of strategies and tools of effective online teaching based on the principles of social process.

Learning in a digital world

Learning in the digital world which means the students learning through an online. The technology allows the students to do things faster and it reach more people. Teachers outraged by students using cell phones in the classroom may be forgetting that the students in the past passed notes or worked on assignments for other classes. One major theme was the use of data to identify students at risk, enhance multimedia presentations and online courses and improve programs.

Learner's goals

Understanding the motivation of students and what they expect to get out of a course or program should influence the design of course or program. For academic learning it is necessary to find many was to move students. It engages and motivates students in the subject matter itself.

It is important to have some kind of knowledge or understanding of why learners are likely to take a course or program, and what they are hoping to get out of it.

Twenty first century digital learner

All the teachers are earnestly trying to adapt their educational system to the twenty first century. One of the strangest things in this age of young people's empowerment is how little input our students have into their own education and its future. Through digital learning the students can learn more details about the subject matter. Digital learning gives interest to the students.

Conclusion

Education in the digital world contains comprehensive collection of strategies. The technology allows the students to do things faster. It is helpful for the students learning.

29. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

Education is at the confluence of powerful and rapidly shifting educational, technological and political forces that shape the structure of educational system across the globe. Many countries are engaged in a number of efforts to effect changes in the teaching / learning process to prepare students for information and technology-based society. The UNESCO World Education Report (1998) noted that the new technologies challenge traditional conceptions of both teaching and learning and, by reconfiguring the teachers and learners one could gain access to knowledge and thereby have the potential to transform teaching and learning processes. Digital Technology provides an array of powerful tools that may help in transforming the present isolated, teacher-centered and text-bound classrooms into rich, student-focused, interactive knowledge environments. To meet these challenges, schools must embrace the new technologies and appropriate the new Digital Technology tools for learning. They must also move towards the goal of transforming the traditional paradigm of learning. To accomplish this goal requires both a change in the traditional view of the learning process and an understanding of how the new digital technologies can create

new learning environments in which students are engaged as learners. Thomas Kuhn suggested that revolutions in science come about when the old theories and methods would not solve new problems. He called these changes in theory and methods as "Paradigm shift." There is widespread concern that the educational experiences provided in many schools will not prepare students well for the future.
Key words: digital technology, learning environment, teacher education, classroom

Introduction

The general notion regarding the use of computers in education is that it may best be used as a tool for drill and practice programs supplementing the instructional process. In such instructional processes, the learners receive information already programmed inside the computer following an algorithm. Although some amount of interactivity is ensured, the general impression is that in such instructional processes, computers control the learning structure giving the learner very little room for creativity, making him a passive recipient of information. There is a need to explore the potentials of this device beyond these traditional notions i.e. the meaningful designing of computer-based instructional processes with increased student participation. Also, it is not the extended usage on the device that would ensure the desired learning; but the nature of these learning tasks, which would transform and enrich the instructional processes. Computer application programs can be used to design learning experience to develop creative and critical thinking and be used as 'mind tools' that can be used by students to represent what they know and to engage in critical thinking about the content (Jonassen, 1997). Technology integration, if done properly, can do many things to help in the process of creating more authentic learning environments.

Today's scenario on digital technology

The present curriculum for Digital Technology in education aims at realizing the goals of the National Policy of ICT in School Education and the National Curricula Framework. Given the dynamic nature of Digital Technology, the curricula, emphasizing the core educational purposes, is generic in design and focuses on broad exposure to technologies, together aimed at enhancing creativity and imagination of the learners. For the teacher, it is an initiation into:

- Exploring educational possibilities of technology,
- Learning to make right choices of hardware, software and Digital Technology interactions, and
- Growing to become a critical user of Digital Technology; and

For the student, it is an initiation into:

- Creativity and problem solving,
- An introduction to the world of information and technologies, and
- An opportunity to shape career pursuits;

Hence based on availability of infrastructure and access, teachers, who are already proficient in Digital Technology, can fast track through the course and students can begin as early as 6th standard, in any case, and complete the course before they leave school.

Digital technology – a tool to help teachers create more 'learner-centric' learning environment

The most effective use of Digital Technology is those in which the teacher, aided by Digital Technology, can challenge pupils' understanding and thinking, either through whole-class discussions or through small group activities using Digital Technology. Digital Technology is seen as important tools to enable and support the move from traditional 'teacher-centric' teaching styles to more 'learner-centric' methods.

Digital technology: used to support change and to support/extend existing teaching practices

Digital Technology could be used to reinforce existing pedagogical practices as well as to change the way teachers and students interact. Using Digital Technology as tool for information presentation is of mixed effectiveness. The use of Digital Technology as presentation tool (through overhead or LCD projectors, television, electronic whiteboards, and guided "web-tours" where students simultaneously view the same resources on computer screens) is seen to be of mixed effectiveness. While it may promote clear understanding of and discussion about difficult concepts (especially through the display of simulations), such uses of Digital Technology can re-in-force traditional pedagogical practices and divert focus from the content of what is being discussed or displayed to the tool being utilized. Teachers, therefore, require extensive, on-going exposure to Digital Technology to be able to evaluated and select the most appropriate resources. However, the development of appropriate pedagogical practices is seen as more important than technical mastery of Digital Technology.

Teacher usage of Digital Technology:

Teachers most commonly use Digital Technology for administrative tasks and for 'routine tasks' such as record keeping, lesson plan development, information presentation, basic information searches on the Internet etc. More knowledgeable teachers rely less on "computer assisted instruction". Teachers, more knowledgeable in Digital Technology, only utilize computer assisted instructions.

Teachers' role in enhancing child's learning achievement

Education, as we know, is instrumental to make the future generation well informed and competent. Unfortunately, the quality and accessibility of education varies so greatly between regions. Hence, the school system of our country often fails to deliver the level of education

necessary to ensure such competency. Many schools have limited resources for buying books, stationary, furniture and other classroom materials.

Digital technology in teacher education

Teacher education institutions are faced with the challenge of preparing a new generation of teachers to effectively use the new learning tools in their teaching practices. Education in India faces a number of problems. These problems include the shortage of qualified teachers, very large student population, high dropout rates of teacher students, and weak curricula. All of these negative aspects result in poor delivery of education. The most obvious technique for professional development of teacher is to provide basic Digital Technology knowledge and skills. It is necessary for teachers to become skilled in operating the new technologies and in exploiting them effectively as educational tools. Teachers must master the use of information technology skills of research, critical analysis, linking diverse types and sources of information, and reformulating retrieved data.

Incorporation of digital technology in teacher education: the need of the hour

Digital Technology is the technology used to handle information and aid communication. It is a term used for desirable, exciting and innovative way to provide lifelong learners with global access to information learning and support. Information systems in Digital Technology include the fusion of computers and telecommunications. The use of Digital Technology changes teacher education mainly in two ways.

- The rich representation of information changes learner's perception and understanding of the content.
- Vast distribution and easy access to information because of social, cultural, and economical constrains.

Some other aspects of digital technology in education are

- **Wireless Technology:** Wireless Communication is an educational technology to improve education. It is the transfer of communication between two or more points that are not connected by an electrical conductor. The most common wireless technologies use electromagnetic wireless telecommunications such as radio and Wi-Fi. It encompasses various types of fixed, mobile and portable applications, including two-way radios, cellular telephones, personal digital assistants, and wireless networking. Teaching and learning provides improvement in all curriculum areas with high quality instruction of the learning that ensures Trainees achieve at high levels.
- **Digital Classroom:** Cognitive arena is influenced when Digital technologies are initiated in teaching-learning process. The major purpose of employing digital learning in the classroom is Student-centered Learning: Here, students show accountability for learning when collaborative activities are implemented through technology.
- **Motivation:** This is important as we have already learned that, we must first engage the attention of our students before they are ready to learn. Digital Learning allows teachers to address various learning styles in the classroom. Students can see, hear and imagine what things feel like as multimedia is used to bring a subject to life. Teachers are no longer limited as vast amounts of knowledge and teaching ideas may be explored.

Digital technology enabled class room learning

Digital Technology enabled class room learning is a move towards using less paper: The digital classroom takes advantage of being able to write on the tablet a variety of programs because it makes written work available anytime and anywhere. The other techniques that could be adopted in a Digital Technology enabled class room are:

- **Use of Projector with Tablet:** The digital teacher uses the projected tablet screen to display and write most notes and work in class.
- **Use of Digital Resources and Digital Tools:** The teacher routinely uses digital resources and has his/her students use them for a variety of purposes including research, texts, and multimedia.
- **Inquiry, Project, & Problem-Based Learning:** One-to-one technology puts powerful tools in the hands of the students which could be used with a more student-centered approach to curriculum which challenges students to find answers to problems and create meaningful digital products.
- **Class Web Sites:** A digital classroom is strongly supported by a class website, extending learning opportunities beyond the walls of a classroom and the time period of the class.

Advantages of digital technology in education

- It allows flexible, self-paced learning where students are, to an appreciable extent, able to choose what they would like to focus on and spend variable amount of time on it based on the perception of their learning needs and positions.
- This leads to added abilities for self-regulated learning.
- It enables to reduce the stigma of failure. Failure is a natural part of reduce the stigma of failure. Failure is a natural part of learning, but it is harder to deal with it in actual classroom settings because of societal pressures. An online environment provides enough privacy and space for learners in order not to feel miserable about minor failures that come along the way and thus helps keep up the motivation.
- Through Digital Technology images could be easily used in teaching and improving the retentive memory of students.
- Teachers can easily explain complex instructions and ensure students' comprehension using Digital Technology.

- ❖ Digital Technology helps teachers to create interactive classes and make the lessons more enjoyable, which could improve students' attendance and concentration.

Disadvantages of digital technology in education

- ❖ It may not help disorganized learners who need more structure and routine available in a physical classroom setting.
- ❖ Difficult to replicate settings such as lab activities that require hands-on experiential learning.
- ❖ Setting up of the devices could be troublesome.
- ❖ It may be too expensive.
- ❖ It may be difficult for the teachers to use Digital Technology when they lack experience in the use of it.

Conclusion

Digital Technology promotes Constructivist Learning. Today, in classrooms, the role of the teachers needs to change from the traditional role of prescriber to that of orchestrator of learning, which necessitates the designing of Digital Technology integrated classrooms, promoting higher order of cognitive skills. The focus is more on the process of information acquisition, the critical and analytical thinking involved in acquiring information from multiple sources, analyzing this information and then designing the learning outcomes in aesthetic presentations. Such a model of learning focuses more on the process over the product, acquiring information from multiple sources, analytical and critical thinking and finally a comprehensive evaluation assessing different areas of student's academic growth. Jonassen (1996) identified many different kinds of software programs that can be used by students; different kinds of tool are suitable for different goals. The phrase "***MIND TOOLS***" was used to describe various computer software such as spread sheet and database applications, concept-mapping programs, multimedia and hypermedia development software. These programs are only considered as mind tools when students in a learning situation use them as cognitive tools. When students are actively involved in constructing a system using the software, they are engaged in many thinking tasks.

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30. TEACHING AND LEARNING IN DIGITAL WORLD

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Abstract

The paper presents the teaching and learning in digital world. Education has taken a whole new meaning that it leaves us with no doubt that our educational system has been transformed owing to the ever advancing technology. Technology and Education are a great combination if used together with a right reason and vision. The digital world is transforming the people play access information, communicate with each other. The digital tools have changed the way of teaching learning in education. Education without emerging technologies is impossible situation today.

Key Words: *Technology, Teaching, Learning, Education and Digital World.*

Introduction

Nelson Mandela says, "Education is the most powerful weapon which you can use to change the world". But the technology has changed the teaching and learning of education in the world. Nearly a billion people on mobile phones and 200 million mobiles are connected to the internet. The use of new technologies like computer, internet, e – mail, CD Rom, DVD s, interactive video, Teleconferencing, e – tutoring, etc. enabling large number of students to get access quality education and adopt self – learning to improve their potentials.

Technological options in teaching and Learning

With the advancement of science and technology, teachers started supplementing their teaching with audio – visual materials. The use of electronic media has changed the complexion of today's classrooms. Virtual classrooms, Web -based learning, Computer mediated learning, etc. which enable the students to learn anything of their choice, at anytime from anywhere and that too at their own pace and convenience. Students may attend school half a day and spend the other half involved in educational activities at home. The students listen to an educational program on the radio or a television broadcast.

Teachers can collaborate to share their ideas and resources online. They can communicate with others across the world in an instant, meet the shortcomings of their work, refine it and provide their students with the best. Technology provides students immediate access to an abundance of quality information much quicker than before.

Information and communication technologies in education

Web – based learning environments may be designed for students of distance education as well as conventional classroom students. With the help of internet, anyone can

visit the homepages available in the websites. Instead of writing to the individuals, announcing important information or changes existing system, they could be incorporated in the homepages of the website so that interested parties may visit them as and when they desire to do.

E – learning takes place in an electronically stimulated environment. E – learning can include training, the delivery of just in time information and guidance from experts. It uses a variety of media like audio, text, virtual environments, video and animation to present the learning content and as such the learner could gain rich learning experiences.

Students getting instructional facilities through online services is called e – tutoring. The student can interact with his tutor either through voice micro – phone or by typing in the keyboard of their computer.

In tele– conferencing, people situated at distant places establish direct contact through tele – communication and converse among themselves. This method liberates people from undertaking expensive and time consuming long distance journeys.

The purpose of the EDUSAT or Educational Satellite is to provide education to all people, primarily children from remote areas of the country who cannot go to schools or colleges.

Digital library includes a wide range of collections stored in digital formats as opposed to print, micro form or other media and accessible by computers. The digital content may be stored locally or accessed remotely via computer networks.

Revolution in learning

Information and communication technology has transformed the means and methods of studying, the modalities of school operations, the manner of investment and the expenditure of resources and the very way we think about what education could be and should do. The internet also changes the way schools work by making possible closer co-operation and interaction among them, within the same country and across continents and oceans. One example is joint " virtual projects". Likewise, parents can be kept informed via the websites of schools – virtual PTAs, so as to speak. A large part of the available educational resources is created by groups outside of schools and academic institutions, yet is free for all and provides excellent inputs for all.

Teacher empowerment

A research indicates that the introduction of technology for educational purposes has the potential to bring positive changes to teaching practices. The teachers stated that the technology helped them to become more effective and creative. Both teachers and administrators agreed that technology had reinforced instruction and functioned as a motivator for the students who were prone to ask questions and participate in the lessons.

Improving the quality of learning

The most reason for considering using technology in educational system is that they put learning in the hands of the user. They facilitate individualizing curriculum, permit learners to dictate the pace of learning and widen sources of information. The quality and effectiveness of learning is enhanced many times through the use of technologies. The technologies allow faculty to incorporate new information and update learning materials and they enable the immediate and rapid transfer of information pertaining to the administration of a course or program of study.

Information communication technology can contribute significantly to the teacher professional development continuum:

- First, Information and communication technology and properly developed multimedia material scan enhance initial preparation by providing good training materials, facilitating simulations, capturing and analyzing practice teaching, bringing world experience into the training institution, familiarizing trainees with sources of materials and support, and training potential teachers in the use of technologies for teaching/learning.
- Second, Information and communication technology open a whole world of lifelong upgrading and professional development by providing courses at a distance, asynchronous learning, and training on demand. Information communication technology can be revised easily and they can introduce new courses in response to emerging demands.
- Third, Information and communication technology break the professional isolation many teachers suffer from. With Information and communication technology, they become part of a network with colleagues and mentors, with universities and centers of expertise, and with sources of teaching materials.

Preparing for Lifelong Learning

How can lifelong learning for all, anywhere and anytime, be achieved? Certainly, formal traditional systems cannot do it, even if they are well financed, run, and maintained. The diversity of needs and settings requires a diversity of means. Here is where learning technologies may provide their most valuable contribution.

They are flexible, unconstrained by time and place, can be used on demand, and provide just in-time education. They have the potential to offer synchronous as well as asynchronous learning opportunities. But, above all, if well prepared, they can pack a wealth of expertise and experience in efficient packages that can be modified and updated all the time in response to feedback, new demands and varied contexts.

Possibilities fall in a wide range of technologies, including videos, correspondence, Internet, and e-learning super structure. This may be the first time in the history of the human race when lifelong learning is not only desirable and urgent, but feasible as well. However, successful

exploitation of technology for lifelong learning for all is dependent on a number of factors:

- Adults need to have a minimum level of basic education, including literacy. Technology should not blind us to the fact that there are still millions of adults who cannot read or write, and, because of that, they cannot use educational programs offered through information technologies, or even through classical correspondence.
- Schools should equip individuals with the necessary cognitive and technical skills to pursue and manage their own continuous learning—how to search, assimilate, define problems, apply knowledge to problem solving, etc.
- Technology literacy—the ability to use technology hardware and software—should be part of basic education and a prerequisite for adults to make good use of it.

Preparing for Lifelong Learning

How can lifelong learning for all, anywhere and anytime, be achieved? Certainly, formal traditional systems cannot do it, even if they are well financed, run, and maintained. The diversity of needs and settings requires a diversity of means. Here is where learning technologies may provide their most valuable contribution. They are flexible, unconstrained by time and place, can be used on demand, and provide just in-time education. They have the potential to offer synchronous as well as asynchronous learning opportunities. But, above all, if well prepared, they can pack a wealth of expertise and experience in efficient packages that can be modified and updated all the time in response to feedback, new demands and varied contexts. Possibilities fall in a wide range of technologies, including videos, correspondence, Internet, and e-learning superstructure.

This may be the first time in the history of the human race when lifelong learning is not only desirable and urgent, but feasible as well. However, successful exploitation of technology for lifelong learning for all is dependent on a number of factors:

- ✓ Adults need to have a minimum level of basic education, including literacy. Technology should not blind us to the fact that there are still millions of adults who cannot read or write, and, because of that, they cannot use educational programs offered through information technologies, or even through classical correspondence.
- ✓ Schools should equip individuals with the necessary cognitive and technical skills to pursue and manage their own continuous learning—how to search, assimilate, define problems, apply knowledge to problem solving, etc.
- ✓ Technology literacy—the ability to use technology hardware and software—should be part of basic education and a prerequisite for adults to make good use of Information and communication technology.

Transformation in the teaching learning process.

Successful introduction of technologies into the learning environment includes support for interdisciplinary interaction with peers and instructors and among groups. The new technologies make learning possible for student to be active learners. Both teacher can control, manipulate and contribute to information and knowledge generation. Using technologies, student not only make choices about the pace and order of a presentation, but also may choose topics for exploration; take note; answer question; explore virtual landscapes; simulate experiments; enter, draw, or chart data; create and manipulate images; make their own PowerPoint presentations; and communicate with others. The technologies have great capacity to facilitate the educational transaction between providers and users. For instance, it can be used to:

- Keep students well informed about the courses that are available to them.
- Enhance teacher-learner contact, an essential part of a good educational environment, through e-mail, chat sessions, etc.
- Encourage active learning. Students do not learn much from memorizing facts and reproducing set
- answers; they derive greater benefits by being active in their learning.
- Facilitate peer support in learning. Sharing one's idea sand responding to the ideas of others improves thinking and increases understanding. Learning can
- improve if it is a team effort rather than a collection of solo performances.
- Provide immediate feedback and encouragement.
- Encourage paced learning through tools such as assignments, tutorials, broadcast programs, computers, conferencing, etc.
- Allow for effective mapping of learning pathways, which facilitate different styles of learning.

Conclusion

Technologies have great potential for knowledge dissemination, effective learning, and efficient education services. Yet, if the educational policies strategies are not right, and if the prerequisite conditions for using these technologies are not met concurrently, this potential will not be realized. The strong belief in the potential of technology, market push, and enthusiasm for introducing technology into schools creates the temptation to implement them immediately and full scale. Integrating technologies into education is a very sophisticated, multifaceted process, and, just like any other innovation, it should not be introduced without piloting its different components on a smaller scale. Digital learning and teaching is convenient and cheaper but it is not substitute for reading. But we cannot live without digital tool. It has merits and demerits so we must take the advantages of it. we are pushed in to the digital world so there will be no classrooms without digital devices. We can use it as a part not a whole.

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31. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

Digital technologies are everywhere and they're bringing many exciting opportunities for our schools, impacting what, where and how education is delivered. For this reason, supporting schools to make the most of new technologies is a significant part of the Ministry's work programme. Certain innovations have been brought about by adopting technologies developed for the use outside education. The implications of digital technologies for children's current and future lives are far-reaching. The role of teacher is changing in smart and active learning methodologies. Now teacher is as a facilitator in learning. Teaching and learning are being modified due to innovations in education. Schools are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number educational tools and resources and subject- matter experts over the internet use. Levels of risk are associated not just with access, but with practices surrounding internet use. Safer behaviour appears to occur within families where there is 'active mediation', where parents share online activities with their children, and sit and talk to them when they are online. Professional dialogue and learning opportunities for digital world need to be designed and led by professional mentors, teaching colleagues, and school leaders who model 21st century teaching and learning practices. Faculties of education need to provide rich and meaningful ongoing learning opportunities for both pre-service and in-service teachers. Provincial ministries need to resource ongoing and appropriate professional development for teachers and deploy innovative and creative solutions for technological resources and infrastructure. "Technology is only as good as we understand the evidence behind it and prepare ourselves to use it effectively" Grus said. Therefore, if used strategically digital technology is a blessing to education.

Introduction

Digital technologies are everywhere and they're bringing many exciting opportunities for our schools, impacting what, where and how education is delivered. For this reason, supporting schools to make the most of new technologies is a significant part of the Ministry's work programme. Certain innovations have been brought about by adopting technologies developed for use outside education. The implications of digital technologies for children's current and future lives are far-reaching. They have become part of our social life, with implications for how we follow our interests and passions, the nature and extent of our participation in civic and political life, our relationship with the environment, and our position within multiple communities, local and dispersed. For many children digital devices and the possibilities, they enable are threaded through everyday life from the earliest days, and their early experiences and understandings are patterned by technology use.

On one hand there are calls to recognize the sophistication of children's everyday uses of digital media and for much greater integration of technology in education to equip children effectively for their current and future lives. On the other hand, there are anxieties about the implications of extensive screen-time and about what or whom children may encounter in digital environments that are hard to police and difficult to confine. Moreover, while many children gain understanding and experience of digital environments from birth their access to devices and experience of using technologies varies considerably. This unevenness is not just linked to economic circumstances but to the different ways in which digital toys and resources are taken up within different families increasing popularity of instructional short-form video such as YouTube illustrates, online resources may well provide an alternative to face-to-face teaching on occasion. However, in schools as elsewhere, while digital technologies may offer new possibilities, what matters is how they get taken up in practice, for example, what children and teachers do with and around them, and how they are used alongside other resources.

Whether working within or across subjects, one of the challenges for schools is that digital technologies can be used in ways to support different pedagogical principles; they might just as easily serve teacher-directed, closed learning, for example, as facilitate open-ended problem solving and critical thinking. To thrive in a rapidly evolving, technology-mediated world, students must not only possess strong skills in areas such as language arts, mathematics and science, but they must also be adept at skills such as critical thinking, problem-solving, persistence, collaboration and criticality

Connecting with Technology

- Schools are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number of educational tools and resources and subject-matter experts over the internet.
- Teachers are using online networks and social media to connect with other schools and peers who can help them adapt their teaching practices to make the most of digital tools.
- Students are using digital technologies to connect with other students across the country and across the world, and to engage in self-directed learning in areas of personal interest and expertise.
- Parents and families are forming stronger connections with schools using digital services like social networks, websites and online surveys.

- Many of us use technology to connect to information and learning whenever and wherever we choose.

Digital Education in India

Digital technology in India has been evolving over the last few years, changing the way students learn concepts in school. The traditional chalk and talk method has paved the way for more interactive teaching methods as schools are increasingly adopting digital solutions to keep themselves abreast with the technological changes. As the current generation of students is well-versed with laptops, i-pads, and smartphones, these innovative methods of teaching guarantee more participation from students. To increase the quality of education with the latest digital technological know-how, majority of the schools and universities are trying to keep pace with the digital changes by implementing them. Thus, by empowering educators, digital technology holds the key to India's educational challenges.

Teacher as A Facilitator in Learning

The role of teacher is changing in smart and active learning methodologies. Now teacher is as a facilitator in learning. Teaching and learning are being modified due to innovations in education. Young children's use of digital technologies, but also highlighted their contribution to relationships, leisure activities and learning. While arguing that risks associated with extensive screen-time need further investigation, the review concluded that technology should be used to support learning across the curriculum, used in contexts that promote talk, and that children need to be supported to approach digital media with 'the degree of discrimination and critical awareness that should attend reading, writing and communication of any kind'

Teaching in A Digital World

Connecting and Empowering the Whole Child unchecked and unfocused use of technology can result in students disconnecting from the "why" of learning and from the real-time relationships that are key to their development and success. Alternatively, high-quality integration of technology has the potential to not only prepare young people for their futures, but also to enhance and expand learning and connectedness in the World.

"The most powerful thing teachers do to engage students is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences."

Looking to The Future

The digital environment is transforming teaching and learning in our schools. We are committed to taking full advantage of this opportunity to help our schools become world leaders in digital education systems through changes to their infrastructure, practices and pedagogy.

Digital Tools Empowers Children

When learning internet programs, kids understand and innovate with the digital world they inhabit. Today's children are born into a technology-based society and learn how to access the internet at a very early age. As parents, it's our responsibility to talk to them about the pros and cons of Internet, teach them safe Internet habits, and use strategies to help them do so safely.

They need to be taught basics, challengers and accelerators like how they can use internet apart from playing games to garner knowledge. Now days there are online lessons through which kids can individually learn multiple activities. They need to be cyber safe online with all the dangerous threats and at the same time be productive & constructive.

21St Century

The most powerful thing teachers do to engage students is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences. We know that certain teaching practices and learning processes engage students and teachers in deeper and more sustained learning by connecting them with knowledge and technology in ways that make a difference to themselves and to others.

In 21st century learning spaces, students can become engaged in challenging work that has value beyond the classroom – in authentic, inquiry-based tasks that captivate their hearts and minds. The many benefits – for both students and teachers – of learning in such contexts, using technology in appropriate and innovative ways, have been well documented. Laptop and projector in a school, student work demonstrating deep understanding of sophisticated concepts emerged from discipline-based inquiry tasks that were intentionally designed with clearly defined criteria in mind.

Effective Social Learning Online

Outside of formal schooling, almost all learning occurs in complex social environments. When online learners have more control of their learning and participate in active or interactive learning experiences such as collaborative, project-based learning tasks, larger learning gains are observed. Complex social environments and interactions can clearly be cultivated online. The thoughtful design of meaningful online learning experiences matters; teachers who design for peer collaboration and individual reflection on learning cultivate stronger learning outcomes.

Building The Collective Capacity

Today's classrooms must be dynamic learning environments where students and teachers can engage in exploration and risk-taking. Teaching and Learning in a Digital World provides practical implementation strategies for creating a culture of deep and reflective learning for students and educators.

Advantages of Digital Learning and Teaching

Technology allows teachers to engage and motivate students in new ways, like taking students on a virtual field trip to other parts of the world. It is without question that students will need to know how to use technology to communicate and collaborate in their future careers. Almost

all jobs use at least one form of technology, so students need to be comfortable using it. Technology gives students the most current information available. Electronic textbooks or web-based content can be updated in real-time. Classrooms can connect with other classrooms around the world to broaden their learning. Teachers can design student-centered lessons by allowing students to take an active part in the lesson. Classroom time can be spent with students asking critical questions and engaging in creative problem-solving. Teachers can use technology to meet the individual needs of students. Specific programs, apps, or websites give teachers the options to offer content to students at different levels, allowing students to access material at their own pace. This means that teachers need to make sure all students can access the material being presented. Technology offers tools, such as voice recognition, volume control, or word prediction software that can support struggling students.

Students can practice collaboration skills by working in teams on projects using shared documents or conferencing technologies. This allows collaboration to happen outside of the classroom or between classrooms in different locations. Students will be motivated from engaging content and game based strategies. They will choose what to learn, how to demonstrate their learning with updated information. It is useful in various ways like time saving, anywhere to study, sharing information, parent's involvement etc. The use of Internet technologies to deliver a broad array of solutions that enhance knowledge and performance.

Risk Involved in Technology

Doubts about the power and negative influence of information technology, consuming children's leisure time disproportionately, damaging their verbal communication skills and potentially exposing them to unsuitable violent and sexual imagery. Common concerns associated with children's internet use relate to child safety, cyber bullying and exposure to unsuitable material. Due to technology students and teachers may get more health issues like headache, back pain, stress etc.

Recommendations for Schools and Teachers

Plan opportunities for children to work creatively with digital technologies in projects that integrate digital technologies alongside other activities. These may involve integrating technology within cross-curricular projects that are motivating and relate to topics or outcomes children care about or are interested in. Plan for use of digital technologies alongside a range of resources, digital and non- digital. This will happen more easily when use of devices is 'normalised' rather than approached as a novelty. Capitalise on opportunities for collaboration on and off-screen and support children to take up such opportunities with confidence. Explore opportunities for facilitating collaboration across groupings and generations as well as within peer groups. Encourage and support children to explore their ideas using the range of media enabled by digital technologies. This will help provide inclusive opportunities for all children to explore concepts, ideas and responses. Encourage children to draw on their own prior experiences and expertise of using digital technologies outside school, and to share their expertise and mentor others.

Conclusion

Levels of risk are associated not just with access, but with practices surrounding internet use. Safer behavior appears to occur within families where there is 'active mediation', where parents share online activities with their children, and sit and talk to them when they are online. Professional dialogue and learning opportunities for a digital world need to be designed and led by professional mentors, teaching colleagues, and school leaders who model 21st century teaching and learning practices. Faculties of education need to provide rich and meaningful ongoing learning opportunities for both pre-service and in-service teachers. Provincial ministries need to resource ongoing and appropriate professional development for teachers and deploy innovative and creative solutions for technological resources and infrastructure. Educational stakeholders must work together, learn together, design and evaluate student understanding and learning together, and leverage each other's best practices to imagine and to create context-specific ideas, practices, and solutions that are flexible and responsive to the diverse learners that each school serves in open participatory learning ecosystems. E-learning offers opportunity to raise educational standards in schools Technology should not replace teachers due to the benefits of face-to-face interaction, however should be carefully incorporated as a facilitator, that provides support to teachers, (yet does not replace them altogether) and prepares students for the inevitable use in wider society and to increase employability Therefore, if used strategically digital technology is a blessing to education.

"**Technology is only as good as we understand the evidence behind it and prepare ourselves to use it effectively**," Grus said.

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32. ROLE OF TEACHING AND LEARNING IN THE DIGITAL WORLD.

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Abstract

In this digital world, teaching and learning provides practical implementation strategies for creating a culture of deep and reflective learning for students and educators. The power of digital integration and assessment tools to support students in meeting more rigorous demands. Especially mobile learning provides easy access to learning anyplace, anytime, making it more convenient to learners. It plays a pivotal role for learners to learn in their own style and their own pace. This paper focuses on the role of teaching and learning in the digital world.

Education in the digital world

Education has become digital in the scene that technology is being used extensively in order to gain knowledge. It helps students and teachers to become more active about social issues with the help of social networking sites& other media. They learn about environment hazards and how protect it. Technology & education are a great combination if used together with a right reason and right vision.

With technology, educators, students and parents have a variety of learning tools at their fingertips. Here are some of the ways to improve education through technology.
Teacher can collaborate to share their ideas. They can communicate with other across the world in an instant, meet the short coming of their students with the best. This approach definitely enhances the practice of teaching.

Students can develop valuable research skill at young age

Technology gives students immediate access to an abundance of quality information which leads to learning at much quicker rate than before.
Students & teacher have access to an expanse of material

They are plenty of resourceful, credible websites available on the internet that both teachers and student can utilize. For example, NPTEL- National programme on technology enhanced learning.

Teaching – learning in the digital age

Digital age has opened up the new dimensions. The total change in the teaching, learning process which is currently based on rote learning & memory. The days of only using chalkboards and books in the teach-learning process have gone. Now days, there is videos or audio interaction in children classrooms. It helps the students think creatively.
Digital learning technologies help instructors

Spread knowledge widely

Digital platforms allow instructors to reach more students. Instructors can disseminate new ideas more quickly, touching more people and impacting more lines.

Engage a worldwide audience

Digital platforms allow instructors to mold worldwide participants into campus teaching, creating global conversations resulting in richer teaching experiences.
Leverage time better

Digital learning provides quick feedback to instructors. Automation eliminates routine grading, freeing course teams to spend more face to face time with students.

Digital learning technologies help students Learn more fully

Rapid assessment, visualizations, simulations and videos with multiple instructors provide a richer learning environment towards a fuller understanding of concepts.
Learn with mastery

The ability to pace learning to one's preference, to review material and to be assessed on a section before moving to another leads to mastery learning. It helps the students to learn anywhere anytime and create a new world of opportunity.

Implications for teaching and learning

- To encourage contact between students& faculty.
- To Develops reciprocity& co-operations among students.
- To encourage active learning.
- To Gives prompt feedback.
- To Emphasizes time on task.
- To Communicates with high expectations.
- To Respects diverse talents& ways of learning.

Mobile learning

M-Learning is defined as learning across multiple contexts through social& content interactions using personal electronic devices. A form of distance education, M-learners use mobile device educational technology at their time convenience.

M -learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids & materials becomes an important part of informal learning.

Lifelong learning& self-learning

Mobile technologies& approaches are also used to assist in language learning. It is used to help people acquire& develop language skills.

Pros of M-learning

- Offer a rich & dynamic learning experience due to the rapid evolution of mobile devices. One can access lessons, video clips and audio libraries from anywhere and anytime.
- Portability is a very light weight and also to take notes easily.

Cons of M-learning

- There is the definite inconvenience of small size screen of a mobile phone.
- Devices may become outdated quickly& sudden obsolescence.
- Organizations may not be completely ready for mobile learning.

To sum up, the digital revolution is creating a new system of paperless teaching and learning process. In the 21st century, "How to learn" is becoming much more important than "what to learn" in the development of technology. Undeniably, the instruments are not as important as show they are used to effectively shape the learning environment for today student.

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33. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

This paper is about 21st century teaching and learning. Nowadays the role of digital in internet in the education sector plays an important role especially the process of empowering the technology into the educational activities. It creates interest among the students and teachers. There are many types of digital learning such as: E-learning, Virtual learning, Blended learning. ICT plays a vital role in classroom. ICT can contribute to universal access to education, equity in education the delivery of quality learning and teaching. ICT is a generic term referring to technologies that are used for collecting, scoring, editing and communicating information in various forms.

Keywords: - *ICT, E-learning, Virtual learning, Blended learning, Synchronous & Asynchronous, Blog*.

Introduction

Digital technology plays a vital role in teaching and learning in our 21st century. Digital technologies are an important part of our future generation. A child uses them to learn new skills. Digital technologies are bringing many exciting opportunities for schools impacting what, where and how education is delivered. Students are using digital technologies to engage in self direct learning. Digital technologies can have many positive impacts on learning and it offers challenging activities and opportunities for real world problem - solving activities. Multi models are comprising in teaching and learning based on digital technology.

Digital Technologies Are Enable:

- ✓ Learning to happen not only in classroom but also anywhere and at any time.
- ✓ A child can understand challenging concepts in this technology world.
- ✓ A child can collaborate with other students and teachers outside of their school.
- ✓ Huge range of resources are available on the internet to support learning.

Digital Teaching:

The development of internet, mobile phones, mobile apps, tablets, laptops and other modern devices, things are becoming more and more digitalized in today's world. The education system in India has become modernized to a great extent, making way for digitalization.

Digital Learning:

Digital learning requires a combination of technology, digital content and instruction. Digital learning is providing students with a laptop, iPod. The students can learn everything through digital. Digital content is the high quality academic material which is delivered through technology. Technology facilitates how students receive the content.

21st Century Teaching and Learning:

21ST century teaching and learning fully based on digital. Everything is in digital, it plays an important role among the students and teachers through teaching and learning process. ICT

ICT has been developing very rapidly nowadays. ICT stands for Information and Communication Technology. The term ICT is used to refer to the convergence of audio-visual and telephone networks with computer networks through a single cabling or link system. ICT is an extended term for

information technology which stresses the role of unified communications and the integration of telecommunications, computers, audio visual systems, which enable users to access, store, transmit and manipulate information.

The main purpose of ICT is to provide the prospects and trends of integrating information and communication technology into the general educational activities. The influence of ICT, especially internet cannot be ignored among the students. The widely use of internet access has been an unavoidable policy that should be anticipated by schools be anticipated by school's authorities.

Learning and Teaching based on ICT

ICT help pupils to learn and teachers to teach more effectively. ICTs present a range of tools that can be used by teachers to present and demonstrate as part of their teaching as well as something for pupils to use as part of an activity as individuals or in groups.

Teachers lesson planning is vital when using ICTs. ICTs seen as important tools to help teachers create more 'learner-centric' learning environment. Pedagogical practices of teachers using ICT can range from only small enhancements of teaching practices using that are essentially traditional methods, to more fundamental changes in their approach to teaching. ICTs can be used to reinforce existing pedagogical practices as well as to change the way teachers and students interact.

The teachers are the main motivator and initiator of the ICT implementing at schools. They should be aware of the social change in their teaching activities. They should be the agent of change from the classical method into the modern one. They must be the part of the global change in learning and teaching modification.

Few teachers typically have a comprehensive knowledge of the wide range of ICT tools and resources. Teachers mentioned used power point and other computer programs to improve their presentation of material to class. Teachers explained that technology enabled teachers to deliver more material to students and it also eliminated several basic problems such as; poor handwriting, poor artistic skill, contrast and visibility.

E-Learning:

E-Learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. There are many terms used to describe learning that is delivered online, via the internet, ranging from distance education, to computerized electronic learning, online learning, internet learning and many others.

E- Learning as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is not a course delivered via a DVD or CD-ROM, Video tape. It is interacting with you and grading your participation, your assignments and tests. It is a successful one.

Blended Learning:

Blended learning combines online digital media with traditional classroom methods. It requires the physical presence of both teacher and student. Here face-to-face classroom practices are combined with computer mediated activities regarding content and delivery. Blended learning is also used in professional development and training settings.

Virtual Learning:

Virtual learning includes Computer and Internet. Students learn independently, in small groups, through enquiry, researching, finding and solving problems. Often they collaborate with each other face-to-face, at the same time, on a task.

Virtual learning can be synchronous (where all students log in at the one time in a virtual classroom or online space), or it can be asynchronous (where they access information and content such as session recordings in their own time).

How to Reduce Unnecessary Activities of Students - Blog

Teachers support their students to have their own blogs in the internet. A lot of web blog providers are free to the users, such as word press. In their blogs the students can create and write something, like an article, poem, news, short stories and they can express their opinion by an online forum provided in the internet. They can share experiences throughout their blogs to others from all over the world. It is an interesting activity for them, and it will lessen their time to visit the negative or porn sites existed.

Conclusion

Our young generation will get more and more information and knowledge by browsing in the internet. They can also create innovation in web design that it may be out of the formal curriculum content, but it will be useful for their future. We can say without technology we won't be able to survive in today's world.

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34. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

In the 21st century ICT plays a vital role in the teaching and learning process. ICT provides an n effective method in the educational field. It creates interest in the students and motivates them to learn. By the way of ICT students are eased to accomplish the complicated as sophisticated problem. It is also confirmed that many students found learning in a technology enhanced setting more stimulating and much better than in a traditional classroom environment. Reflection of learning is important for both students and teachers and this too can be enhanced by appropriate uses of interactive technologies like ICT. The definition, meaning, advantages and the disadvantages of ICT in the teaching and learning process can be found in the following information

Introduction

The digital world changed mindsets about schooling, teaching, learning, assessment and engaged teaching and learning matter more than ever. In this aspect ICT becomes to play important role in the process of learning and teaching. Learning and teaching relationship made possible by new educational technologies that is through ICT. reflection of learning is important for both students and teachers and this too can be enhanced by appropriate uses of interactive technologies like ICT.

ICT proves that students who used educational technology felt more successful in school and also they are motivated to learn more and have increased self- confidence and self-esteem. In the learning and teaching through ICT not only assist all type of learners but also improves their capacity in learning, it also enhances the effectiveness of learning and teaching process. Through the usage of ICT in learning and teaching the students become independent learners. Using ICT becomes eco-friendly, no paper can be wasted as in the ordinary learning and teaching process.

Learning and teaching through ICT creates an interactive and engaging learning environment for both the learners and teachers. The educational effectiveness of ICT depends on how they are used and for what purpose. So, as upcoming teachers we have to guide the students in proper usage of ICT in the classroom learning and teaching process. Introduction:

Definition of ICT:

"ICT" is the Information and Communication Technologies. "ICT in Education" means "Teaching and Learning with ICT". ... Worldwide research has shown that ICT can lead to improved student learning and better teaching methods.

Meaning of ICT

ICT covers any product that will store, retrieve, manipulate, and transmit or receiving information electronically in a digital form. For example, personal computers, digital television, email, robots. So ICT is concerned with the storage, retrieval, manipulation, transmission or receipt of digital data. Importantly, it is also concerned with the way these different uses can work with each other.

ICTs (Information & Communication Technologies)

Includes computers, mobile phones, digital cameras, satellite navigation systems, electronic instruments and data recorders, radio, television, computer networks, and satellite systems. Almost anything which handles and communicates information electronically; ICT includes both the hardware (the equipment) and the software (the computer programs in the equipment). "The most powerful thing teachers do to engage students is to design engaging, meaningful, authentic work and technology-enhanced learning experiences."

Unique Features of ICT

- ICT facilitate collaboration and communication
- ICT aid in the visualization of difficult concepts.
- ICT promote creativity.
- ICT enable multiplier effect of documents.
- ICT provide flexibility and variety in learning.
- ICT provide a multimedia effect.

Influence of ICT in students learning

- ICT helps to provide interactive learning experiences.
- ICT stimulates and motivates students to learn.
- ICT aids in the understanding of difficult concepts and processes.
- ICT cater to different learning styles.
- ICT helps student to gain valuable computer skills
- ICT aids in collaboration and group work.

The benefits of ICT in general

ICT is found to be advantageous in several ways as mentioned by Herington (2002), (1) technology facilitates exposure to authentic language; (2) technology provides the access to wider sources of information and varieties of language; (3) technology gives the opportunity to people to communicate with the world outside; (4) technology allows a learner – centered approach; (5) technology develops learner's autonomy. ICT helps people in order to get information and to communicate each other in wider range.

Three main advantages of ICT tools in Education

1. Through ICT, images can easily be used in teaching and improving the retentive memory of students.
2. Through ICT, teachers can easily explain complex instructions and ensure students' comprehension.
3. Through ICT, teachers are able to create interactive classes and make the lessons more enjoyable, which could improve student attendance and concentration.

Three main disadvantages of ICT tools in education

1. Setting up the devices can be very troublesome.
2. Too expensive to afford
3. Hard for teachers to use with a lack of experience using ICT tools

Connecting with technology for learning and teaching:

Schools are using digital devices like laptops and tablets to quickly, easily and cheaply connect students with a huge and ever-growing number of educational tools and resources and subject-matter experts over the internet.

Teachers are using online networks and social media to connect with other schools and peers who can help them adapt their teaching practices to make the most of digital tools.

Students are using digital technologies to connect with other students across the country and across the world, and to engage in self-directed learning in areas of personal interest and expertise. Parents, families are forming stronger connections with schools using digital services like social networks, websites and online surveys.

Many of us use technology to connect to information and learning whenever and wherever we choose.

Conclusion

To conclude that ICT in education enhance the ability of the students to make use of technologies in their education. In the 21st century ICT plays a vital role in the educational process. ICT provides information in text, graphics, audio and video. It also allows a greater degree of interactivity through real time audiovisual transfers and chart. It creates flexibility and creativity in learning. Usage of ICT in the learning and teaching process create an effectiveness in the students to learn the content with interest.

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35. IMPACT OF TECHNOLOGY IN EDUCATION IN THE DIGITAL WORLD

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Abstract

Education is something that was once not available in certain parts of the world. Even in countries where there was education, there were still many issues with getting it to the general public. There are many advances in technology that have helped education to become more readily available than it once was. Inventions such as the online class room have improved education in a significant way and it is growing around the world every day. Understanding the ways technology has helped with education and the actual impact this made will help you to see how vital technology has become in the education world.

Introduction

As technology grows, there are many ways that it can be applied to different things. Education is no different. There are many technological advances that have changed the world of education in the 21st century. Knowing about these advancements and the impact they have on education around the world can will show just how essential technology is to education. These different technologies use in the class room have a vast impact on the overall education of students around the world which will be shown.

Online Classroom

This is one of the first things that many think of when it comes to technology and education. There are many ways that this has been implemented in all levels of school. There are classes that children can take online while they are still in school to earn extra credit. There are even online schools, the children in that school can do from home as well.

The impact of this technological advancement is on more than just a grade school level though. Today just about any college class that a person could want to take can be done online. Today many people can earn through online. In fact, in 2011, University of Phoenix gave out 6,000 online degrees. This is monumental when you compare it to other schools. For instance, Arizona State University, which is known for having a high number of students only gave out 2, 075 degrees that year, all were from on campus education.

This has become the ideal way for many people to earn an education. Single parents and those who must work and go to school find that this form of education is more suited for their needs. This is because it can easily be worked around the schedule of the student. While there are times that a student may need to be online, such as for required online discussion boards, tests or submitting the assignment, overall it is easier to fit into one's schedule than driving to a classroom at a specific time.

An online class can also be a benefit to students who have certain issues, such as attention issues or are hard of hearing. This is because while a person may not ask the teacher to repeat themselves or may not have the option during a physical class, when they are watching a prerecorded lecture, they are able to rewind and to see and hear the information again. This can help them to get a better understanding of the lesson which is the main goal.

The global impact of online classroom

Online classrooms are being used all over the world and are creating global classrooms. This can help to increase the number of students in developing and third world countries to get the education they need. Though the numbers of people enrolled in these schools is still lower than in America, it is climbing regularly. In fact, Russia had an increase in student registration by 230% in January of 2013.

With global classrooms more than just formal education can be found. There are sites that offer classes that can help to give people more knowledge. Even if this is something as simple as internet safety or something similar, it is still something that is worth knowing about. This can help to give people more knowledge and understanding that can help them throughout their life.

There are still some issues that the online classroom faces in other countries. One of the biggest issues is the fact that most classes are still in English. While there are some who may speak English, not all do, which can put certain students at a disadvantage. There are many online classrooms that work with translators and are slowly translating their courses so they can be used by people all around the world.

Tablet in place of text books

There are several schools that have started moving to tablets instead of textbooks in the classroom. One school for example is Clearwater High School. The high school first made the switch four years ago and the results have been outstanding. For instance, the cost for the books was significantly reduced. This is because the Kindles the school uses only cost about $70 which can be less than the cost of one text book.

School provides the facilities to go on the internet which they may not be able to do at home, easily carry around their textbooks and study wherever they were. They found that test scores for students rose 18% the first year that the Kindles were introduced. Students are able to see their homework assignments, complete work, read their textbooks and much more right at the touch of their finger.

Every year, Tablets have come down in price. While there is top models that will run several hundred dollars, there are many out there that can be purchased even under $100. This can help to make these devices more readily available for schools with budget constraints as well as students who want to have them for their own educational resources.

The growing impact of tablets in the classroom

While tablets can be a great source for textbooks in the classroom, there is much more that they have to offer. A survey of 150 teachers during the 2012 to 2013 school year stated that 87% of them felt that the tablets made a significant improvement to the learning environment.

One of the ways that tablets can help in the classroom is with the use of certain apps. There are apps that are educational on a number of different levels. Even for preschoolers and kindergartners, there are apps out there to help them learn their ABCs, sight words and addition facts. There are also apps such as SAT Math which is designed to work with the student in the classroom as well as at home.

Schools that participate in this program will register kids with the program and send the registration information to the parents with the instructions for locating and downloading the app. Students will have math questions that are on their level and will help them to improve their math skills. The app also tracks the progress of the student to allow them to see their progress.

Another way that tablets have revolutionized the classroom experience is that they give the student the ability to be in a classroom via webcam. They can watch lectures, even if they are home sick or cannot be in the classroom for the day. This can also give them the ability to chat with other students for discussions. It also makes it easier for students to video chat when working on school projects from home.

Students will also have an array of different information right at the push of a button with a tablet. This is because tablets are designed with wifi capabilities so the student can find internet when they are out and about. Even in the classroom, a child can find the answer they are looking for simply by using a Google search. Students can also use the internet to get a deeper understanding of the information given to them in the classroom. They can use Google Earth to get a better understanding of terrain in different parts of the world and can explore the cosmos in the same day.

The Introduction of the SMART Board:

When many people think of the most crucial tool in the classroom, often times it is white board. This is because it is where the teacher can teach visually to the class while teaching a certain topic. It is important because people learn in different ways and learning a lesson in numerous ways can help to give a deeper understanding that will stay with the student. With the introduction of the SMART Board, the white board will never be the same.

The SMART Board utilizes a digital projector to project the data on a synched computer to the white board in the classroom. This has come to be used by all levels of education, from pre school to graduate classes. There are many ways that it can impact the classroom.

Using these boards makes the learning experience more comprehensive for the students. Teachers are able to use different resources on their computers while teaching that before were unheard of. Even if this is just something as simple as watching videos on a topic or being able to see pictures related to the topic, it can make a significant impact on the way students understand the lesson they are being shown. It has even been shown to be very helpful for children with special needs.

The SMART Board can be a great way to conference with others, which can be used in many capacities. Students could talk with other students on the other side of the world. There is even the opportunity for students to watch a presentation by a presenter from another location and ask questions just as they would if the person was right in front of them.

Instant Messaging and Texting

While texting may be frowned upon during class, there is a major benefit that it can provide for the learning experience. It can allow the student the ability to communicate directly with teachers as well as other students. This can help them to get a better understanding of the subject matter. They can even ask questions that they were too afraid to ask in class.

There are many ways that this can be done. Most schools that offer this do it through a service that gives students private access. This helps to ensure that the chat rooms stay school related. This can also give the student the ability to ask a question in private to faculty if they do not feel comfortable asking about it in a public forum.

These forums are a great way to help students learn to collaborate with their peers, which is a necessary skill for the work place. They will be able to learn to work together on projects as well as debate topics. It can also be a great forum for teaching children about ethics and other lessons that they will need to learn about.

The involvement of teachers on these sites varies drastically depending on where the school is. There are some schools where there is no requirement for faculty involvement which can lead to less beneficial results than those where teachers are required to be online with the children for a certain time. It can help to not only help enrich the student's understanding but also help to strengthen the bond and trust they have for the teaching faculty at the school.

Computers in the Classroom

Computers have become an essential part of life for most parts of the world. Even in third world countries. many have started using computers to help improve the education. The impact of the computer in the classroom is far reaching.

The computer will give the student the chance to strengthen their skills with these machines the society grows more dependent on them for every day functions in life. It is important for people to understand the basics of the computer as well as navigating the internet. Depending on the career path of the student there will be a varying degree of necessity with the computer.

Students can engage in games that can help them to learn lessons. In fact, there are many educational games out there that are so fun for children that they do not even realize that they are learning while they playing. With this, there are games that can help to improve mental acuity, which can be a huge help when it comes to learning.

Virtual Gaming and the Impact on Education:

For many, video games and virtual reality bring up an image of relaxation and time for fun. The truth of the matter though is that they also have their place in the classroom. They are important for those who are going into digital and video game programming. However, the reach of this technology reaches even further.

There are virtual reality games out there that can help people learn technical skills. One of the biggest examples of this is with virtual gaming for surgical students. By being able to practice the surgery in virtual environment they are able to get the experience they need for operating on a live human being.

Conclusion:

One of the best things about technology is that it is constantly changing. As technology changes it will effect on education. For instance, in the late 90's, schools started offering more computers in the classrooms and this was the only technology they had. Today, just about everything in the classroom can be done electronically. This can help to streamline education, grades and most aspects of the class. While this effect is most noted in North America and Europe, the impact of the technology can be seen around the world.

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36. A SYNERGISTIC EFFECT OF TEACHERS AND TECHNOLOGY IN HIGHER SECONDARY EDUCATION

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Abstract

Technology in present condition has a reciprocal relationship with teaching. It has powerful place in instruction and the classroom. It plays major role as like teachers, and with combined action of teachers and technological tools leads to greater impact on student's learning experiences. Several technological tools such as schoology, schoolfy, smart seat, teacher vision, smart teacher, etc. makes teacher's time to be saved and also effective attention from student's sides. In case of students, the influences are quite significant throughout their life. Teachers also in progress with using technology over time through five specific stages includes entry, adoption, adaptation, appropriation and invention. Technology in the classroom is both beneficial to students and teachers. Synergism between teachers and technology involves applying ideas from various sources to create the best learning environment possible for students. As a result, it is ultimate carrot for students. It is something they want to master. Learning to use it enhances their self-esteem and makes them excited about coming to school. Hence, technology should be integrated as a tool to promote and extend student learning on a daily basis. Technology use allows students to create, problem solve, research, collaborate, and interact globally. Students that use technology as a tool and or a support for communicating with others are in an active role rather than the passive role of recipient of information by a teacher or reading textbooks. Students have the ability to learn and express themselves in their individual learning style too.

Keywords: *Synergism, Interaction or Co-operation, Footprint- impact, Pace-speed, Salvation-deliverance*

Introduction

Technology can have a reciprocal relationship with teaching. The emergence of new technologies pushes educators to understanding and leveraging these technologies for classroom use; at the same time, the on-the-ground implementation of these technologies in the classroom can (and does) directly impact how these technologies continue to take shape. While many new technologies have emerged throughout history, so has the cry for educators to find meaningful ways to incorporate these technologies into the classroom – be it the typewriter, the television, the calculator, or the computer. And while some professional educators may have become numb to this unwavering 'call' – and for good reason – it is crucial to consider that the excitement over games and social networking isn't just business and industry "crying wolf." Indeed, those previous technologies have a powerful place in instruction and the classroom. With these more recent technologies, we think educators should take the call, even if only on a trial basis. Undoubtedly, without these recent technologies (i.e. digital games, Web 2.0, etc.) in the classroom, strong lessons can still be achieved, but there's a sharp disconnect between the way students are taught in school and the way the outside world approaches socialization, meaning-making, and accomplishment. It is critical that education not only seek to mitigate this disconnect in order to make these two "worlds" more seamless, but of course also to leverage the power of these emerging technologies for instructional gain.

Synergism

It is an interaction of discrete agencies, agents (as teachers and technologies), or conditions such that the total effect is greater than the sum of the individual effects. It is also called synergetic or synergistic effect. synergism is the position of those who hold that salvation involves some form of cooperation between two agents.

Teachers and technology as agents

Teachers are the "gateway" to technology use by students. According to the authors, teachers will predictably progress in using technology over time through five specific stages: entry (even experienced teachers find themselves facing discipline problems, resource management, and personal frustration), adoption (teachers begin to intersperse instruction on how to use technology among traditional whole group lectures), adaptation (the new technology is thoroughly integrated into traditional classroom practice and there is higher motivation/ student engagement among students), appropriation (evidenced change in classroom practice, teachers' personal mastery of technology, and change in beliefs about the usefulness of technology), and invention (teachers experiment with new instructional patterns of teaching and ways of relating to students and to teachers and have an increasing tendency to reflect on teaching, question old patterns, and speculate about the causes behind the changes they are seeing in their students). Used appropriately, it has been shown to cause many positive benefits and to create student-centered environments. "Technology is not a panacea for educational reform, but it can be a significant catalyst for change.

Technology helps teachers to manage classroom effective

The teacher plays an essential role in every student's education, behavior and development. In the present competitive environment, it's a tough task for a teacher to manage a classroom by concentrating on every student. Technology nowadays makes everything easy and effective. It helps teachers in managing their classroom very efficiently. **High school teachers face enormous pressure**

to prepare students for state standardized tests, college admissions tests, and exams. High school teachers can use these tools to aid with organization, teaching, assessing students and more.

- **Schoology** allows teachers to have access to better course management and communication for free. Schoology provides numerous mobile apps which will help you in managing the classroom, these apps can easily transform any classroom into 1:1 interactive learning environment if you implement BYOD (Bring-Your-Own-Device) in your school.
- **Schoolfy** is a great educational platform that welcomes teachers from across the world in its community. It allows teachers to create their private social network and add students, parents, colleagues and others for collaboration. It provides many free tools that help teachers to set homework, send documents, create calendars and evaluate students' assessments.
- **Smart Seat** is an iPad app, which helps teachers to manage their classroom in the palm of their hands. Teachers can use it to create a virtual class, add students, their photos and other information.
- **Teacher Vision** is one of the best websites which helps teachers to manage their classroom by providing students with an interesting and fun learning environment. It values a teacher's time and helps them optimize it.
- **Smart Teacher** is an Android app which helps teachers plan their classes smartly. With Smart Teacher, a teacher can plan curriculum for students, manage their report cards, assess their performance and design personalized instructions.

Footprints of technology in students

According to a study by IT Trade Association Comp TIA just released this month, around 75 percent of educators think that technology has a positive impact in the education process. The impact that technology has had on today's schools has been quite significant. This widespread adoption of technology has completely changed how teachers teach and students learn. Teachers are learning how to teach with emerging technologies (tablets, iPads, Smart Boards, digital cameras, computers), while students are using advanced technology to shape how they learn. By embracing and integrating technology in the classroom, we are setting our students up for a successful life outside of school. Here are a few benefits of using it.

- Increased motivation and self esteem
- Improved technical skills
- More collaboration with peers
- Increased use of outside resources
- Improved communication strategies
- Improved retention rate
- Helps students learn at their own pace

Conclusion

In conclusion, technology is a versatile and valuable tool for teaching and learning and becoming a way of life. Technology in the classroom is both beneficial to students and teachers. It creates new ways of obtaining and presenting information and gives students new ways of analyzing and understanding the world around them.

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37. இணையவழிக் கற்றலும் கற்பித்தலும்

முனைவர். ச.பாரதி, உதவிப் பேராசிரியர், தமிழ்த்துறை, கிருஷ்ணசாமி மகளிர் அறிவியல், கலை மற்றும் மேலாண்மையியல் கல்லூரி, கடலூர்

முன்னுரை:

பழங்காலக் கற்பித்தல் முறைகள் ஆசிரியரை மையமாகக் கொண்டு நிகழ்ந்தன. ஆசிரியர் இருக்கும் இடத்திற்கு மாணவர்கள் சென்றுகல்வி பயின்றனர். ஆதனால் குருகுலக் கல்வி, திண்ணைப் பள்ளி போன்ற ஆசிரியர் சார்பு கற்பித்தல் முறைகள் இருந்தன. இந்நடைமுறை பிற்காலத்தில் மாறுபட்டுமாணவர் மையக் கல்விமுறைநடைமுறைக்குவந்தது.

இணையவழிக் கல்வி

ஆசிரியரை மையமிட்ட கல்வி, மாணவரை மையமிட்ட கல்வி என்ற இரண்டு அணுகுமுறைகளும் மாறி இணையத்தை மையமிட்ட கல்விமுறை இன்று பரவலாகப் பயன்பாட்டிற்கு வரத்தொடங்கி உள்ளது. இம்முறையில் இணையச் செய்திகள் பெரிதும் பயன் கொள்ளப் பெறுகின்றன. இங்ஙனம் இணையத்தைப் பயன்படுத்திக் கற்றல்-கற்பித்தல் நிகழ்வதால் இதனை இணையவழிக் கற்றல், கற்பித்தல் என்றுகுறிப்பிடுகிறோம்.

'இக்கற்பித்தல் முறைவெறும் வகுப்பறைக் கற்பித்தல் போல் ஆசிரியரிடமிருந்து மாணவர் கற்கும் ஒருவழிப் பாதையாக மட்டும் இல்லாமல் பல வழிப்பாதை கொண்ட முழு நிறைவு கொண்ட கற்பித்தல் முறையாக விளங்குகிறது' என்பார் முனைவர் மு.பழனியப்பன். இக்கூற்று முற்றிலும் உண்மையாகும்.

'ஆசிரியரின் ஆதிக்கத்திலும், கட்டுப்பாட்டிலும் கட்டுண்டிருந்த வகுப்பறைக் கற்றல் முறை, இன்று மாணவர்களை மையப்படுத்தி, மாணவரின் கற்றல் சிந்தனை, உளபோக்கு, கற்றல் திறன், சூழல், வாய்ப்பு இவற்றை அடிப்படையாகக் கொண்டு கற்பித்தலை ஆர்வத்தையும், தன்னம்பிக்கையையும், தானே தன்னை மதிப்பீடு செய்யும் ஆற்றலையும் சுய சிந்தனையையும் வளர்ப்பதற்கு வாய்ப்பளிக்கிறது. இந்த வாய்ப்பைவழங்கும் தன்மைகொண்டதுஇணையவழிக் கல்வியும் கற்றலும்ஆகும்.

பயன்கள்

- விரும்பும் நேரத்தில் படிக்கலாம்.
- விரும்பும் பாடத்தைப் படிக்கலாம்.
- விரும்பிய இடத்தில் இருந்தேபடிக்கலாம்.
- தொடர்புடைய செய்திகளைத் தேடிப் படிக்கலாம்.
- தொடர்புடைய செய்திகளேஅன்றிநாம் எதிர்பாராத கூடுதல் செய்திகளும் கிடைக்கலாம்.
- பிறர் துணையின்றித் தானே படிக்கலாம்.
- புடிப்பதில் ஆர்வம் கூடும்
- படிக்கும் வேகத்திற்குஏற்பஅதிகம் படிக்கலாம்.
- 24 மணிநேரமும் படிக்கலாம்.

கல்விசார் இணையதளங்கள்

கல்விசார் இணையதளங்களை மூன்றுவகையாகப் பகுக்கலாம். அவை:

(1) கற்பிப்பவை
(2) நூலகங்கள்
(3) தகவல்களை வழங்குபவை

கற்பிப்பவை

இணையதளங்களின் மூலம் கல்வி கற்பிக்கும் அரசு நிறுவனங்களும் பல்கலைக்கழகங்களும் உள்ளன. இவற்றைத் தவிர தனியார் நிறுவனங்களும் அமைப்புகளும் கூட இப்பணியில் ஈடுபட்டுள்ளன.

நூலகங்கள்

பள்ளிகள்,கல்லூரிகள் மற்றும் பல்கலைக்கழகங்கள் வழிக் கற்பித்தலானாலும் சரி இணையம் வழியாகக் கற்பித்தலானாலும் சரிஇவற்றிற்கு நூலகங்களின் பங்களிப்பு இன்றியமையாததாகும். எனவே இணைய நூலகங்களின் பயன்பாடு மிகஅவசியமாகிறது

தகவல்களை வழங்குபவை

மேலே கூறியவையே அன்றிக் கல்வி தொடர்பான செய்திகளை வழங்குவனவற்றைத் தகவல்களை வழங்குபவை என்னும் வகைப்பாட்டினுள் அடக்கலாம் அவ்வகைகளில் குறிப்பிடத்தக்கவையாக பின்வருவனவற்றைக் குறிப்பிடலாம்.

(1) விக்கிபீடியா
(2) பல்கலைக்கழகநிதிநல்கைக் குழு
(3) மனிதவளமேம்பாட்டுத்துறை
(4) தமிழ்நாடுமாநிலஉயர்கல்விமன்றம்
(5) தமிழகஅரசுஉயர்கல்வித்துறை
(6) தமிழ்வளர்ச்சித்துறை

இணையத்தில் இடம் பெற்றதேடுதல் பொறியின் வாயிலாகத் தேவையான பல்துறைத் தகவல்களை, செய்திகளை கருத்துகளை அறிந்துகொள்ளவும், அதைப்பயன்படுத்தவும் வாய்ப்பும் வசதியும் உள்ளன. இன்றையஅறிவியல் ஆய்வுகளுக்கும் சுய அறிவைவளப்படுத்தலுக்கும் பெருநிலையில் துணைசெய்கின்றன. எந்த ஒருபொருளும் அல்லது செய்தியும் இணையத்தில் இடம் பெற்றால் கணநேரத்தில் உலகளாவிய நிலையில் உடனே சென்றடைகிறது.

இணையதளத்தில் 200க்கும் மேற்பட்ட தேடுதல் பொறி செயல்படுகிறது. 2 கோடிக்கும் மேற்பட்ட வலைத்தளங்கள் உள்ளன. முன்பு தேடுதல் முயற்சியில் காலமும் பொருளும் பெருமளவில் செலவாயின. ஆனால் இன்று உலகின் ஒருகோடியில் இருந்துகொண்டு உலகின் பிறவேறு எந்தப் பகுதியாக இருந்தாலும் அங்குள்ளத் தகவல்களை நமக்குத் தேவையானவற்றை நொடிப்பொழுதில் உடனே தேடிப்பெறும் வாய்ப்பினை வழங்குகிறது.

பயனர் வகைமை

இணையதளத்தை விரும்புகின்ற அனைவரும் பார்வையிடலாம், இலவசமாகப் பயன்படுத்திக் கொள்ளலாம். கீழ்க்கண்ட நான்கு பயனர் வகைமைகளில் ஏதேனும் ஒன்றில் தங்களைப்பதிவு செய்துக் கொள்ளலாம்.

காண்போர்:: இத்தளத்தைப் பார்வையிட விரும்புகின்றவர்கள் தங்களைப் பதிவுசெய்துக் கொள்ளவேண்டும். இவர்கள் தளப்பொருள்களையும், பாடத்திட்டங்களையுமம் பார்வையிடலாம். இதற்குகட்டணம் கிடையாது.

- **அறிநர்:** பாடத்திட்டங்களில் உள்ளபாடப்பொருள்களைப் பார்வையிட்டுத் தங்களதுஅறிவைப் பெருக்கிக் கொள்ளலாம். இவர்கள் அதற்கானகட்டணத்தைச் செலுத்தவேண்டும்.
- **மாணவர்:** இணையபல்கலைக்கழகம் வழங்கும் சான்றிதழ், பட்டயம், பட்டம் பெறவிரும்புகின்றவர்கள் படிப்புக் கட்டணம் மற்றும் தேர்வுக் கட்டணம் உள்ளிட்டவற்றைச் செலுத்தவேண்டும்.
- **நூலகஉறுப்பினர்:** நூலகத்தை மட்டும் காணவிழைவோர் நூலக உறுப்பினர் ஆவர். இவர்கள் நூலகத்தை மட்டுமே காணஇயலும். இதற்கு கட்டணம் ஏதும் இல்லை.

ஒருமொழியினைக் கற்பிக்க,

1. திட்டமிடுதல்
2. ஆர்வமூட்டல்
3. ஆலோசனை வழங்கல்
4. மதிப்பிடுதல்
5. ஊக்குவித்தல்
6. ஒழுங்கினை ஏற்படுத்தல்
7. வினாவுதல்

போன்ற உத்திகள் கையாளப்படுகின்றன. நவீன தொழில்நுட்ப வசதிகளுக்கேற்ப இத்தகைய உத்திகளைக் கொண்டு கல்விமுறையில் தரப்படுத்தலும் புதமையும் கொண்டு விளங்குகிறது.

முடிவுரை:

இவ்வாறு இணையம் கற்றல்-கற்பித்தலிலும் மிக பெரிய மாற்றங்களை ஏற்படுத்தியுள்ளது. இணைய வழியான கல்விமுறை ஆசிரியர்களின் கற்பித்தலிலும் மாணவர்களின் கற்றலிலும் புதியவகைப் பரிமானங்களை உண்டாக்கிக் கொடுத்திருக்கின்றன. எளிமை, விரைவு, விரிவு, விளைபயன், ஈர்ப்பு, மனமகிழ்வு, பல்லூடகம் முதலான தன்மைகளைக் கொண்டிருப்பதால், இணையம் வழியான கல்விமுறை இன்றைய காலத்திற்கு மிகவும் ஏற்றதாகவும் தவிர்க்க இயலாத ஒன்றாகவும் ஆகிவிட்டது. பல தொழில்நுட்ப வசதிகளைப் பயன்படுத்தி உலகம் முழவதும் இணையவழி கற்பித்தலை எளிதாக்கலாம் என்பது தெளிவாக்கப்பட்டுள்ளது என்பதே இவ்வாய்வின் முன்வைக்கப்பட்டக் கருத்தாகும்.

38. அகழ்வாராய்ச்சி

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கருத்துச் சுருக்கம்

நவீன தொழில்நுட்பங்களைப் பயன்படுத்தி கற்றல் கற்பித்தலில் அகழ்வாராய்ச்சியை பற்றியும் பண்டய மக்கள் வாழ்க்கை முறைகள், நாகரிகம், வாழ்ந்த இடங்கள் ஆகியவற்றை அறிதல்.

அகழ்வாராய்ச்சி என்பதன் பொருள்

அகழ்வாராய்ச்சி என்பது புதையுண்ட பொருட்களை தோண்டி எடுத்தல் என்பது பொருள்.

அகழ்வாராய்ச்சி:

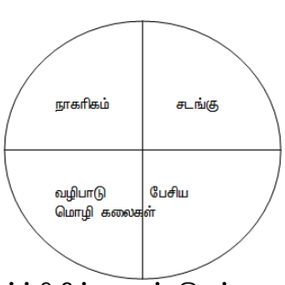
"கல்தோன்றி மண்தோற்றாக் காலத்தே வாளோடு முன்தோன்றிய மூத்தக் குடி" – என்ற மேற்கோளுக்கு ஏற்றவாறு பல பகுதிகளில் வாழ்ந்த பண்டைய மக்கள் தனித்தும் பிற மக்களோடு கலந்தும் பல நாகரிகங்களையும் பண்பாட்டையும் வளர்ந்து வந்தனர்.

கற்கால மக்கள் செப்பு பொருட்களை பயன்படுத்த தொடங்கியதும் கல்லால் செய்யப்பட்ட பல பொருட்களையும் மண்பாண்டங்களையும் புறக்கணித்துவிட்டனர். இவை கண்காணிப்பு இல்லாமல் நாளைடைவில் மண்ணுக்குள் புதைந்தன. மேலும் பண்டைய மக்கள் நல்லிடங்களைத் தேடி அலைந்து இடம் மாறி அங்கும் இங்குமாகவும் ஆற்றோரங்களிலும் காட்டு பகுதியிலும் வாழ்ந்தனர்.

இயற்கை சீற்றத்தாலும் காலமாற்றத்தாலும் மக்கள் பயன்படுத்தியப் பொருட்கள் மண்ணுக்குள் புதைந்தது. புதைந்து கிடப்பற்வற்றை கண்டுபிடிக்க மண்மேடு இடங்களை தோண்டி பார்த்தனர். இவ்விடங்களில் காணப்படும் பல திறம்பட்ட பொருட்களை ஆய்ந்தனர். இதன் மூலம் உண்மை மற்றும் அம்மக்களின் வாழ்க்கை முறை அறியப்பட்டது. இதுவே அகழ்வராய்ச்சி ஆகும்.

அகழ்வாராய்ச்சியின் பயன்கள்

அகழ்வாராய்ச்சியின் வாயிலாக உண்மை செய்திகளையும் நம் முன்னோர்களின் வாழ்க்கை முறை பற்றியும் அறியலாம்.



அகழ்வாராய்ச்சியின் மூலம் இவற்றை அறியலாம்.

அகழ்வாராய்ச்சி செய்யப்பட்ட இடங்கள்

"வாழ்வை நுணுக்கமாக செதுக்கு நல் எண்ணங்களை உளியாக்கு நம்பிக்கையே! உன் வாழ்க்கையின் அடித்தளமாகும்" – என்ற மேற்கோள் படி அகழ்வாராய்ச்சி செய்யப்பட்டன.

மொகஞ்சாதோரோ:

கி.பி.1922 ஆம் ஆண்டு வரை வேதகால நாகரிகமே இந்தியாவின் தொல் பழங்கால நாகரிகம் என்று கூறப்பட்டு வந்தது. ஆனால் 1922 ஆம் ஆண்டு இந்திய தொல்லியல் துறையினர் சிந்து மாநிலத்தில் மொகஞ்சாதோரோ என்னும் இடத்தில் ஒரு பெரிய மண்மேட்டைத் தோண்டி அகழ்வாராய்ச்சி நடத்தினர். அதன்மூலம் அங்கு மண்ணுக்கு அடியில் ஒரு அழகிய நகரம் புதைந்து கிடப்பது கண்டுப்பிடிக்கப்பட்டது. இதுபோன்று பஞ்சாப் மாநிலத்தில் ஹரப்பா என்னும் நகரம் புதைந்து கிடப்பதும் கண்டுப்பிடிக்கப்பட்டது. இந்த இரு நகரங்களைப் பற்றிய செய்தியை உலகறிய செய்தவர் தொல்பொருள் ஆய்வியல் அறிஞர் சர். ஜான் மார்ஷல் என்பவர் நவீன தொழில்நுட்பங்கள் வழியாக உலகறிய செய்தார்.

சிந்து சமவெளி நாகரிகம்:

சிந்து சமவெளி நாகரிகத்தை திராவிடர் நாகரிகம் என்று கூறுவதற்கு சிந்து சமவெளியில் தோண்டி எடுக்கப்பட்ட நாணயங்களும் பொருட்களும் சான்றாக அமைந்துள்ளன. இதனை சர். மார்டிமர் வீலர் ஹிராஸ் பாதிரியார் போன்ற ஆய்வாளர்கள் கண்டறிந்தனர்.

அரிக்கமேடு அகழ்வாராய்ச்சி

புதுச்சேரிக்கு அருகாமையிலுள்ள அரிக்கமேடு என்னும் இடத்தில் நிகழ்த்திய அகழ்வாராய்ச்சியில் சங்ககால பாடல்கள்

இந்நூலில் குறிப்பிடப்பட்டிருந்த பல பொருட்கள் கண்டெடுக்கப்பட்டன. அதற்காக அங்கு 40ற்கும் மேற்பட்ட குழிகள் தோண்டப்பட்டன. இதுவே தமிழ்நாட்டில் நடத்தப்பட்ட மிகப்பெரிய அகழ்வாராய்ச்சி ஆகும்.

ஆதிச்சநல்லூர் அகழ்வாராய்ச்சி:

1904ஆம் ஆண்டில் ஆதிச்சநல்லூர் என்னும் இடத்தில் தொல்லியல் ஆய்வாளாரான அலெக்சாண்டர் ரெயா என்பவர் ஆய்வு நடத்தினார். அங்கு மண்பாண்டங்கள், இரும்பு கருவிகள், ஆயுதங்கள், நகை அணிகள், பொன் வெண்கலம் மற்றும் அரிய கற்கள் ஆகியவை கிடைத்துள்ளது. மேலும் தமிழர்களின் பண்பாட்டு கூறுகளில் ஒன்று தாழி அமைத்தல். இறந்தோரை புதைப்பதற்காக நம் முன்னோர்கள் பயன்படுத்தியுள்ளனர். இதில் இறந்தவர்கள் மேலும் அவர்

பயன்படுத்திய பொருட்களையும் சேர்த்து புதைத்தனர். இந்த தாழிகளை தோண்டி எடுப்பதன் மூலம் தமிழர்களின் பண்பாட்டு கூற்றை வெளிப்படுத்தும் வண்ணம் அமைந்துள்ளது.

இதுபோன்று பல இடங்களில் அகழ்வாராய்ச்சி நடத்தப்பட்டது.

மேற்கோள்:

"மூச்சு நின்றால் மட்டும் மரணம் இல்லை நம் நாட்டின் பண்பாடு, நாகரிகம் மறைக்கப்பட்டாலும் அது உலக மக்களின் மரணம் தான்". இதன் மூலம் பண்பாடு உணரலாம்.

கற்றல் கற்பித்தலில் நவீன தொழில் நுட்பத்தின் பயன்கள்:

"சூரியன் விழித்தெழும் திசையே பூமிக்கு கிழக்கு,
உன் விரல்களில் அடங்கும் தொழில் நுட்ப கருவிகளே
உன் வாழ்வின் விதி விலக்கு".

கற்றலிலும் கற்பித்தலிலும் அதிக அளவில் இன்று நவீன தொழில் நுட்பங்கள் பயன்படுத்தப்படுகிறது. இன்றைய பள்ளி மாணவர்களின் ஒருசில பாடங்கள் (தமிழ், சமூக அறிவியல்) இவற்றில் அதிகம் மக்களின் வாழ்க்கை முறை பற்றியும் நாகரிகம், பண்பாடு பற்றியே பாடங்கள் அமைந்துள்ளன. மாணவர்கள் தங்கள் முன்னோர் வாழ்க்கை முறைகளையும் அகழ்வாராய்ச்சி நடைபெற்ற இடங்களையும் நேரில் சென்று காண முயல்வது கடினமாகும்.

ஆதலால் இன்றைய பள்ளி மாணவர்களுக்கும் பட்டதாரி மாணவர்களுக்கும் அகழ்வாராய்ச்சி நடந்த இடங்கள் பழங்கால பயன்படுத்திய பொருட்கள் அனைத்தும் கணிணி மூலமாகவும் இணையதளம் மூலமாகவும் அறிய முடிகிறது. மேலும் இன்றைய குழந்தைகளுக்கு கணிணியின் மூலம் உண்மையான செய்தகளை இணையதளம் வழியாக கற்பிப்பதன் மூலம் அகழ்வாராய்ச்சி பற்றியும் நம் முன்னோர்களின் வாழ்க்கை முறைகள் பற்றியும் ஆர்வமுடன் கற்கின்றனர். மேலும் ஆசிரியர்கள் எளிய முறையில் பாடங்கள் கற்பிப்பதற்கு தொழில்நுட்ப சாதனங்கள் இன்றியமையாத ஒன்றாகிறது.

மேற்கோள்:

"சோதனையே வாழ்க்கை என்று நினைத்தால்
தோல்விகள் நம்மை வெல்லும்
சாதனையே வாழ்க்கை என்று நினைத்தால்
வெற்றிகளை நாம் வெல்லாம்"

என்பதை பறை சாற்றுகிறது தொழில்நுட்ப சாதனங்கள்.

முடிவுரை

மேற்கண்ட உரையின் மூலம் அகழ்வாராய்ச்சி பற்றியும் பண்டைய மக்களின் வாழ்க்கை முறை பற்றியும் தொழில்நுட்பங்கள் வழியாக அறிந்துக் கொள்ள முடிகிறது.

ஆய்ந்த நூல்கள்

- இணையதளம்
- பள்ளி சமூக அறிவியல் பாட நூல்
- தனிப்பட்ட கருத்துகள்

39 கற்றல் - கற்பித்தலில் புதிய தொழில்நுட்பங்கள்

முனைவர். ம.சியாமளா, உதவிப் பேராசிரியர், தமிழ்த்துறை, கிருஷ்ணசாமி மகளிர் அறிவியல், கலை மற்றும் மேலாண்மையியல் கல்லூரி, கடலூர்.

முன்னுரை

கற்பித்தலும் கற்றலும் பல்வேறு காரணிகளை உள்ளடக்கிய ஒரு நிகழ்வாகும். இக்காரணிகள் கற்பவர் தன் இலக்கு நோக்கி செல்லும் போதும், விஷயங்களைத் தெரிந்து கொள்ளும் போதும், பழக்கவழக்கங்கள், கல்வி கற்றல் மூலம் அடையும் திறன்கள் முதலியவற்றில் ஒன்னுக்கொன்று தொடர்புடையதாக அமைந்துள்ளது.

கற்பனை உலகை கண்முன் காட்சிப்படுத்துதலின் வாயிலாக பல அறிய தகவல்களைப் பெற்றுத்தர முடியும். மாணவர்களின் அறிவுத்திறன் மேம்படும். எனவே தகவல் தொடர்பு தொழில் நுட்ப கருவிகளின் வாயிலாக கற்றல் - கற்பித்தலின் சிறப்பினை எடுத்துரைப்பதே இக்கட்டுரையின் நோக்கமாகும்.

கற்பித்தலில் உள்ள தொழில்நுட்ப கருவிகள்

வெவ்வேறு வகையான தொழில்நுட்பங்களைப் பயன்படுத்தி தகவல்களை மின்னணுத்தொடர்பு மூலம் பிறருக்கு அனுப்புதல், சேமித்தல், புதிதாக உருவாக்குதல், வெளிப்படுத்துதல், பரிமாறிக் கொள்ளுதலே – தகவல் தொடர்பு நுட்பம் என்பதாகும்.

இந்த தொழில் நுட்பத்தில் வானொலி, தொலைக்காட்சி, படக்காட்சி, டி.வி.டி., தொலைபேசி, (தொலைபேசி, மொபைல்) செயற்கைக்கோள், கணினி மற்றும் அதைச் சார்ந்த மென்பொருட்கள் ஆகிய அனைத்தும் அடங்கும். மேலும், படக்காட்சி மூலம் கலந்தாய்வு, இமெயில், பிலக்ஸ் உள்ளிட்ட கருவிகளின் சேவைகளும் இதில் அடங்கும்.

தகவல் பரிமாற்ற காலத்திற்குத் தகுந்தாற்போல் கல்வியை வழங்க, நவீன தகவல் தொடர்பு நுட்பங்களைப் பயன்படுத்துவது அவசியம். இதற்குக் கல்வியாளர்கள், முதல்வர்கள், ஆசிரியர்கள், தொழில்நுட்ப வல்லுநர்கள் ஆகியோர் தொழில் நுணுக்கங்கள், பயிற்சி, நிதி, கட்டுமானத் தேவைகள் போன்றவற்றில் சரியான முடிவுகளை எடுக்க வேண்டும். புது மொழியைக் கற்றுக் கொள்வதைவிட, புதுமொழியில் கற்றுக்கொடுப்பது பலருக்குச் சிரமமான பணிதான்.

கல்வியில் தகவல் தொடர்பு தொழில்நுட்பத்தின் பங்கு

கல்வியில் தகவல் தொடர்பின் முக்கியத்துவத்தை அனைவரும் அறிவர். ஆனால், தகவல் தொடர்பு தொழில்நுட்பத்தின் குறிப்பிட்ட பங்கு மற்றும் அதன் முழுமையான பலனை பெருதல் குறித்தே விவாதங்கள் நடந்து வருகின்றன.

பயன்படும் தொழில்நுட்பங்கள்

உலகளவில் தொழில் நுட்ப பயன்பாட்டின் அனுபவங்களைப் பார்க்கும் போது, பெரும்பாலும் அவை, பல்வேறு உடகங்கள் மூலம் கற்றல், கல்வித் தொலைக்காட்சி, கல்வி வானொலி, இணையதளம் மூலம் ஆலோசனை வழங்குதல், நூலகங்கள் மூலம் ஆராய்தல், அறிவியல் தொழில்நுட்பத்தில் செயல்முறைகள், ஊடகங்களின் பயன்பாடு, இளம் குழந்தை வளர்ச்சி, குறைந்தளவு மக்கள்தொகை உள்ள இடங்களில் கல்வி, முதியோர் கல்வி, பெண்கல்வி, வேலைத்திறனை அதிகரித்தல் ஆகிய பகுதிகளில் தகவல் தொடர்பு நுட்பங்கள் குறிப்பாக பயன்படுத்தப்பட்டுள்ளன.

ஆசிரியர்களைத் தயார் செய்யவும், அவர்களது பணிக் காலத்தில் பயிற்சி அளிப்பதற்கான நுட்பங்கள், கொள்கைகளைத் திட்டமிடல், உருவாக்குதல், புள்ளி விவரங்கள் பராமரித்தலுக்கான நுட்பங்கள், பள்ளிகள் பராமரிக்கத் தேவையான நுட்பங்கள் போன்ற தொழில் நுட்பங்கள் மூலமாகப் பயன்படுத்தப்படுகின்றது.

இன்றைய தொழில் நுட்பங்கள்

கல்வி கற்றலுக்குப் பயன்படும் நுட்பங்கள் குறித்த ஆய்வில், கற்பிக்கும் உபகரணங்கள், ஆடியோ, வீடியோ மற்றும் இணைய வடிவிலான கருவிகள், மென்பொருள், பொருளடக்கம், இணைக்கும் முறைகள், ஊடகம், கல்வி சம்பந்தப்பட்ட இணையதளங்கள் போன்ற தொழில் நுட்பங்கள் இன்றையக் காலக்கட்டத்தில் பயன்பாட்டில் உள்ளது.

நாளைய தொழில் நுட்பங்கள்

முடிவெடுப்போர், பயன்படுத்துவோரின் எண்ணங்களுக்கேற்ப, எதிர்காலத்தை கவனத்தில் கொண்டு – என்ன இருக்கிறது என்பது மட்டுமல்ல, என்னவரும் என்பதை எதிர்நோக்கியும் புதிய, தேவையான தொழில்நுட்பங்கள் பற்றி சுருக்கமாக இப்பகுதியில் காணலாம்.

வானொலியும் தொலைக்காட்சியும்

20ஆம் நூற்றாண்டின் தொடக்ககாலத்திலிருந்தே கல்வித் துறையில் வானொலியும் தொலைக்காட்சியும் பயன்படுத்தப்பட்டு வருகின்றன.

இந்த தகவல் தொடர்பு சாதனங்கள் மூன்று வழிகளில் பயன்படுத்தப்பட்டுள்ளன.

- நேரடியாக பாடம் எடுத்தல் - வானொலி மூலம் கற்பித்தல் கலந்தாய்வு செய்தல், தொலைக்காட்சியிலும் பாடங்கள் பயிற்றுவிக்கப்படுதல்
- பள்ளிக்கல்வி ஒலிபரப்பு – வேறுவிதமான பயிற்றுவிக்கும் வாய்ப்புக்கள் கிடைக்காத பட்சத்தில் வானொலிக் கல்வி ஒலிபரப்பு பயிற்றுவித்தலுக்கு உதவிகரமாக இருக்கிறது.
- பொதுவான கல்வித்திட்டங்கள் / நிகழ்ச்சிகள் - இவை அன்றாட வாழ்க்கைக்குத் தேவைப்படும் கல்வியை வழங்கி வருகிறது.

வானொலி மூலம் கற்பித்தல் மற்றும் கலந்தாய்வு செய்தலில், தினமும் வகுப்பறையில் பாடங்கள் ஒலிபரப்பப்படுகின்றன. குறிப்பிட்ட தலைப்பிலான வானொலிப் பாடங்கள், பிரத்யேக பிரிவினருக்காக, ஒரு குறிப்பிட்ட அளவில் தொடர்ந்து வழங்கப்பட்டு வருகின்றது. இது ஆசிரியருக்கு உதவிகரமாக இருக்கும். பயிற்றுவிக்கும் முறையை மேம்படுத்தும். கல்வி கற்கும் திறன் இதன் மூலம் அதிகரிக்கும். இம்முறையால், கல்வி கற்கும் வாய்ப்பு மற்றும் தரம் மேம்படுவதாக ஆராய்ச்சி தெரிவிக்கின்றன. அதிக எண்ணிக்கையிலான மக்களுக்குப் பாடங்களை எடுத்துச்செல்ல, இம்முறை சிறந்த மற்றும் குறைந்த செலவிலான முறையாகும்

தொலைக்காட்சி பாடங்கள், மற்ற கற்பிக்கும் முறைகளுக்கு உதவிகரமாகவோ அல்லது தனிப்பட்ட கற்பிக்கும் முறையாகவோ பயன்படும். தொலைக்காட்சி பாடங்களில், தற்போது ஆசிரியர் பேசுவது மட்டுமின்றி, நேயர்களுடன் உரையாடுவது, அவர்களை நிகழ்சியுடன் ஒருங்கிணைப்பது போன்ற பணிகள் செய்யப்படுகின்றன. தொலைக்காட்சி கல்வி ஒலி / ஒளிபரப்பில் பாடங்களின் தொகுப்பும், மற்றவைகளும் சேர்க்கப்பட்டு, கல்வி கற்றல் பணி எளிமையாக்கப்படுகிறது.

பாடத்திட்டத்தில் உள்ள குறிப்பிட்ட பாடங்களை ஒலிபரப்புவது மட்டுமல்லாமல், பொதுவான கல்வி, வாழ்க்கைக்குத் தேவையான பல நிகழ்ச்சிகளை வழங்குவது வானொலிக்கு முக்கிய பணியாக உள்ளது. அடிப்படையில் வானொலி அல்லது தொலைக்காட்சியில் ஒலி / ஒளிபரப்பாகும் எந்த நிகழ்ச்சியுமே பொதுவான கல்வி நிகழச்சியாக எடுத்துக் கொள்ளலாம்.

கல்வி பயன்பாட்டில் வானொலி - தொலைக்காட்சி

- நேரடியாக பாடங்களை ஒலிபரப்பு செய்தல் - இம்முறை, தற்காலிகமாக ஆசிரியர்கள் இல்லாத போது, மாணவர்களுக்குப் பாடம் கற்பிக்க உதவுகிறது
- பள்ளிக்கல்வி – (கல்வி ஒலிபரப்பு) - இது பாடம் நடத்தும் ஆசிரியருக்கு உறுதுணையாக இருக்கிறது. மேலும் கல்வி கற்கும் உபகரணங்கள் வேறு இல்லாத போது இம்முறை பயன்படும்.
- சமூகம், நாடு, உலகம் தழுவிய பொதுவான கல்வி நிகழ்ச்சிகள், பொதுவான மற்றும் முறைசாராக் கல்வி வசதிகளை வழங்குகிறது.

நேரடி பாடம் நடத்துதலுக்கு, வானொலி மூலம் பள்ளிக்கல்வி பாடங்கள் பெரிதும் உதவுகிறது. இதில் கணிதம், அறிவியல், சுகாதாரம், மொழிகள் ஆகிய பாடங்களில், மாநில மற்றும் தேசிய அளவிலான பாடத்திட்டங்களில் வானொலிப்பாடங்கள் தயார் செய்யப்பட்டு வகுப்பறையில் தினமும் 20-30 நிமிடம் ஒலிபரப்பு செய்யப்படுகிறது. இது பள்ளியில் பாடங்கள் எடுக்கும் தரத்தை மேம்படுத்த உதவும்.

ஆசிரியர்களின் தகவல் தொடர்பு தொழில்நுட்பப் பயன்பாடு

தகவல் தொடர்பு தொழில்நுட்பங்களை, ஆசிரியர்கள் பெரும்பாலும் நிர்வாகப் பணிகளுக்கே பயன்படுத்துகிறார்கள்.

ஆவணத் தயாரிப்பு, பாடத்திட்ட தயாரிப்பு, தகவல் காட்சிப்படுத்துதல், அடிப்படை தகவல் தேடல் போன்ற அன்றாட பணிகளுக்கே ஆசிரியர்கள் தகவல் தொடர்பு தொழில்நுட்பங்களை –அதிகமாகப் பயன்படுத்துகிறார்கள்..

ஆசிரியர்கள் கொண்டிருக்கும் கற்பிக்கும் கொள்கைகளைப் பொறுத்தே அவர்கள் தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்தும் முறை அமைகிறது. இதைப் பயன்படுத்தும் ஆசிரியர்கள் பொதுவான நேரடி போதனை முறைகளைப் பயன்படுத்துவதில்லை. மென்பொருட்களை அதிகம் பயன்படுத்தும் ஆசிரியர்கள், ஆக்கப்பூர்வமான கற்பிக்கும் முறைகளை கடைபிடிக்கிறார்கள்.

ஆசிரியர்களின் சுய நம்பிக்கை மற்றும் ஊக்கம்

ஆசிரியர்கள் தொழில்ரீதியான வளர்ச்சியில் பங்கெடுப்பதற்கு கூடுதல் ஊக்குவிப்பு மற்றும் ஆதரவு ஆகியவை தேவைப்படுகின்றன. சான்றிதழ்கள் அளிப்பது, பணி முன்னேற்றம், ஊதிய உயர்வு, அவ்வாறான திட்டங்களில் பங்கெடுக்க ஊதியத்துடன் கூடிய அனுமதி, சக ஆசிரியர்கள் சமுதாயம் மற்றும் பள்ளிகளில் அங்கீகாரம் அளித்தல், குறைந்த புறக்கணிப்பு கூடுதல் - செயல்திறன் போன்ற பல வழிகளில் ஊக்குவிக்கலாம்

தகவல்தொடர்பு தொழில்நுட்பங்கள் மூலம் கிடைக்கும் புதிய கூடுதல் தகவல்கள் மட்டுமே போதுமானதல்ல.

புதிய கூடுதல் தகவல்களை விட, தங்களுடைய புரிதலைச் சிந்திக்கவும், கேள்வி கேட்கவும் வகை செய்தல் மாணவர்கள் சாதனையில் மேம்பட அதிக முக்கியமாகும்.

வெற்றிகரமான ஆசிரியர்கள் தொழில்ரீதியான மேம்பாட்டு மாதிரிகள் மூன்று கட்டங்களை உள்ளடக்கியுள்ளன.

- பணியில் சேரும் முன், கற்பிக்கும் முறைகளில் ஆரம்பத் தயாரிப்புகள் பாடத்திட்ட ஆளுமை, நிர்வாகத் திறன்கள், தகவல் தொடர்பு தொழில்நுட்பங்களை உள்ளடக்கிய பல்வேறு கற்பிக்கும் கருவிகளைப் பயன்படுத்துதல்.
- பணியில் இருக்கும் போது, வடிவமைக்கப்பட்ட நேருக்கு நேரான அல்லது தொலைநிலைக்கல்வி முறையிலான வாய்ப்புகள், பணியில் சேரும்முன் பெற்ற பயிற்சிகளை அடிப்படையாகக் கொண்டு அவர்களின் நேரடி தேவைகளைப் பொருத்து பயிற்சிகள் அளித்தல்
- அன்றாட தேவைகள் மற்றும் சவால்களைக் கருதி, தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்தி அளிக்கப்படும் முறைப்படுத்தப்பட்ட மற்றும் முறைசாரா வழிகளில் தொடர் பயிற்சிகள் மற்றும் ஆதரவு.

ஆசிரியர்களின் சிறப்பான தொழில் ரீதியான மேம்பாடு, கற்பிக்கும் முறைகளை முறைப்படுத்த வேண்டும்.

ஆசிரியர்கள் தொழில் ரீதியான மேம்பாடு, வகுப்பறைச் சூழல்களை பெரிதும் மாதிரிப்படுத்தி அமைய வேண்டும். கற்றல் மற்றும் கற்பித்தல் ஆகியவற்றில் தகவல் தொடர்பு தொழில்நுட்பங்கள் முக்கியக் கூறுகளாகப் பயன்படுத்தப்பட வேண்டி இருந்தால் அதற்கான ***செயல் ரீதியான*** பயிற்சிகள் அவசியம். மேலும் தொழில் ரீதியான மேம்பாட்டு முயற்சிகள், சிறந்த நடவடிக்கைகள் மற்றும் நடத்தை அடிப்படைகளிலும், ஆசிரியர்களிடையே கூட்டு முயற்சிகளை ஊக்குவிக்கும் வகையிலும் அமைய வேண்டும்.

ஊக்குவிக்கும் காரணிகள்

ஆசிரியர்கள் தகவல் தொடர்பு தொழில்நுட்பங்களைப் பயன்படுத்துவதை முறைப்படுத்த, பல வகையான மாற்றங்கள் செயல்படுத்தப்பட வேண்டும்.

கற்பிக்கும் முறைகளை மாற்றுதல், பாடத்திட்டங்களை மறுசீரமைத்தல் மற்றும் அவற்றை ஆய்வு செய்தல், பள்ளிகளுக்கு மேலும் தன்னாட்சி வழங்குதல் ஆகியவை. ஆசிரியர்கள் தகவல் தொடர்பு தொழில்நுட்பங்களை நேரடியாக பயனளிக்கும் வகையில் தங்கள் பாடத்திட்டங்களைக் கற்பிக்கப் பயன்படுத்த முடியும்.

செயல்படக்கூடிய கருவிகள் அவசியம்

தகவல் தொடர்பு தொழில்நுட்பங்கள் சிறப்பாக பயன்படுத்தப்பட வேண்டுமானால், எளிதில் மற்றும் போதுமான அளவில் கணினிகளும், அவற்றை இயக்க முறையான பயிற்சிகள் ஆசிரியர்களுக்கு வழங்கப்பட வேண்டும். தகவல் தொடர்பு தொழில் நுட்பங்களை அறிமுகப்படுத்துவதற்கு சிறிது காலம் ஆகும்.

தொழில் நுட்பங்களைச் சிறப்பாகப் பயன்படுத்த, புதிய திறன்களை வளர்த்துக்கொள்ளுதல், அவற்றை தற்போதைய பாடத்திட்டம் மற்றும் கற்பித்தல் முறைகளில் ஒருங்கிணைத்து பயன்படுத்துதல், கூடுதல் பாடங்களை திட்டமிடுதல், ஆகியவற்றுக்கு போதுமான கால அவகாசம் அளிக்கப்பட வேண்டும்.

பள்ளிகள் மற்றும் சமுதாயத்தின் ஆதரவும் தேவை

சிறப்பான முறையில் பயன்படுத்த, பள்ளி நிர்வாகம் மற்றும் சில நேரங்களில் சுற்றுப்புற சமுதாயத்தின் ஆதரவும் ஆசிரியர்களுக்கு மிகவும் முக்கியம். இதற்காக, இந்த இரு வகையான ஆதரவாளர்களுக்கும் புரிதல் அளிக்கக் கூடிய முயற்சிகள், சிறப்பான தகவல் தொடர்பு தொழில்நுட்ப பயன்பாட்டில் முதலீடு செய்வதற்கு மிகவும் அவசியமாகும்.

கல்வித்துறையில் தகவல் தொடர்பு தொழில்நுட்பங்களைப் அறிமுகப்படுத்துவது ஒரு பெரிய அளவிலான மறுசீரமைப்பு முயற்சியாகும். எனவே, வெற்றிகரமாக செயல்படுத்தப்பட்ட அவ்வகை முயற்சிகளைப் பற்றி அனுபவங்கள் பகிர்ந்து கொள்ளப்பட வேண்டும்

முடிவுரை

பழையன கழிதலும் புதியன புகுதலும்
வழு அல கால வகையின் ஆனே

என்று கூறும் நன்னூல் இலக்கிய வகைகளுக்கு மட்டுமன்றி கல்வி மேம்பாடு குறித்த தமிழரின் உயரிய சிந்தனையை எண்ணி வியக்கும் வகையில் சமூகத்தில் ஏற்பட்டுள்ள தகவல் தொழில்நுட்ப சாதனங்களில் வாயிலாக சமூகத்திற்கு ஏற்படும் வளர்ச்சிக்கு துணையாக கற்றல் - கற்பித்தலில் பயன்படுத்தும் விதம் குறித்தும் அதனால் ஏற்படக்கூடிய நன்மைகள் குறித்தும் இங்கு எடுத்துரைக்கப்பட்டன

40. MOBILE (M-) LEARNING THROUGH THE MOBILE-APPS OF "EDMODO" AND "MOODLE" IN FACILITATING DIGITAL TEACHING-LEARNING

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Abstract:

The evolution of mobile-learning (m-Learning) has changed the ways of learning and teaching. With the increasing popularity of mobile devices, m-learning has become important among a generation of digital learners. Majority of m-learning services are provided through the Learning Management Systems (LMS) and the application or "app" forms of the same in various mobile operating systems

like Android, Windows, iOS and so on. Such 'on-the-go' learning management apps like Edmodo and Moodle have given learning a new fervor altogether, where accessibility between teachers and students have expanded beyond conventional classroom interactions. This paper aims at sharing an experience in usage of the Edmodo app and the Moodle app, in promoting digital teaching and learning, by providing an insight into how these can promote digital learning. Edmodo and Moodle provide free and secure educational learning networks which may be used to provide a platform for teachers to create and manage an online classroom community as well as enable students to connect and work with their classmates, teachers anywhere and anytime. Parents can also participate to build a learning community like never before to monitor children's day-to-day progress using these apps. Therefore, an advanced-participatory and, collaborative approach to learning can only be possible through digital learning platforms like Edmodo and Moodle. The scope and purview as well as relative merits of these apps versus traditional learning scenarios in Indian classrooms will be discussed during the course of this paper. ***Keywords**: M-Learning, Edmodo, Moodle*

Introduction:

The onset of technology integration into teaching and learning has brought in a paradigm shift in the way teaching and learning occurred in traditional classrooms. Education in the digital world has transformed students from passive recipients of knowledge to active constructors of knowledge by virtue of having access to a wide range of information through electronic gadgets, primarily mobiles and smartphones with internet connectivity. Teachers' roles have shifted from dispensers of knowledge into facilitators or mentors who can manage diverse discourses and practices as well as stimulate the intellectual capacities of students in the treatment of information available. Due to the information boom, learners today have a vast exposure to a wide range of materials. The options are many but learners are not aware of what the right option maybe. Technology integration into learning began with the introduction of the educational television and radio that provided audio visual resources of leaning. Thereafter internet emerged and till date is the dominant technological innovation in the world to have affected all spheres of life including education. The Internet is an excellent tool for use in the classroom because it allows extension of horizons, so that students learn to communicate and collaborate, therefore encouraging learning. Students also need to know how to retain the information in the form of knowledge while going through authentic content on the internet. Without proper guidance provide by the teacher, the experiences gained by learner in the digital classroom cannot be successful.

M-Learning (Mobile Learning):

Mobile Learning is related to e-Learning and distance education with distinctive focus on learning across contexts and learning with handheld devices. A definition of mobile learning maybe given as:

> "Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learners takes advantage of the learning opportunities offered by mobile technologies. In other words, mobile learning decreases limitation of learning location with the mobility of general portable devices."
>
> [Pradeep Kumar, 2010, p 84]

Today more than six billion people have access to a connected mobile device and for every one person who accesses the internet from a computer, two do so from a mobile device. Mobile technology is changing the way we live and it is beginning to change the way one learns. Mobile Learning (M-learning) is a revolution in e-Learning. It involves the use of mobile technology, either alone or in combination with some other form of information and communication technology (ICT), to enable learning, anytime and anywhere. M-Learning can enable learners to expand their learning in different ways – learners can use mobile devices to access educational articles, connect with peers and teachers, both inside and outside classrooms. Mobile learning also encompasses efforts to support broad educational goals such as the effective administration of higher education systems and improved communication between schools and families.it is convenient in that it is accessible from virtually anywhere. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. M-learning also brings strong portability by replacing books and notes with small devices, filled with tailored learning contents.

> "M-learning is convenient in that it is accessible from virtually anywhere. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. This highly active process has proven to increase exam scores from the fiftieth to the seventieth percentile, and cut the dropout rate in technical fields by 22 percent"
>
> [Saylor, 2012]

Edmodo:

Edmodo is a social learning platform for teachers, students, and parents that takes the ideas of a social network and refines them and makes it appropriate for a classroom. Edmodo is free for teachers, students and parents-and always will be. Using Edmodo, students and teachers can reach one to another and connect by sharing their ideas, solving problems, and sharing tips. A teacher can post assignments and work on Edmodo; students can get help from the entire class on Edmodo. It is a safe environment. There is no inappropriate content because teacher can observe everything that is posted on Edmodo. Parents can join in the Edmodo learning community which brings a level of

transparency where parents can see all the progress reports of their children this would have been difficult to achieve without the technological platform provided by Edmodo. The relative advantages of digital learning via Edmodo over traditional classroom can be listed as follows:

- Edmodo is a brilliant way to stay connected with a class, and for the learners to stay connected with each other.
- It is a very innovative way to stay connected with teachers always on-the-go whenever students have doubts.
- Students can 'turn in' their assignments form anywhere and anytime through Edmodo even if he/she is absent in class. So virtual communication in absentia is possible using this Edmodo app.
- It is very easy to give feedback to students on their work; no matter what students upload, teachers can leave a comment attached to it providing instant feedback which is more effective.
- It is a fantastic way to teach through social media. It is further amazing how many students claim to be fantastic at social media like Facebook and WhatsApp and yet have difficulty posting and communicating on relevant topics and commenting in a constructive way in digital education platforms. The Edmodo app is a safe space for them to learn, as it closely resembles the format of any other social media.
- It allows learners to connect just with a specific group whether it is their own classroom or a private study group. Hence information available for a particular group cannot be seen by others.
- Students who are normally shy in the classroom, can take advantage of Edmodo and use it to speak privately with the teacher or express easily through writing.
- Parents can also create an account which will allow them to see their children's assignments and grades.
- Teachers can also send alerts to parents about school events, missed assignments, and other important notices through Edmodo.

For Teachers, it is fairly easy to join Edmodo's mobile application by creating a free account. They may then create a group for the students and share the group code with every student who wishes to join that group. Additionally, 'settings' are used for adding information, modification of the community, changing passwords and group profile information and so on. For students, after receiving the Group Code from the teacher, students have to login to the app of Edmodo and use that group code for joining the group. This way learner can access the mobile learning platform easily. As a parent, one may also login to Edmodo by using a unique parent code provided by the teacher. After that they can monitor their ward's progress and this is especially beneficial for modern day working parents who fail to devote much time to education.

The Basic Features of Edmodo are mentioned as follows:

- Posting of Notes: This is the main feature that makes Edmodo appealing. Teachers and students can post content, and respond to other posts easily through comments.
- Posting of Alerts: Alerts are used for sending important messages to people or groups. It is done the same way as posts.
- Posting Assignments: Creating an assignment and posting them is easy using the Edmodo app. Students can write or upload assignments. Using Edmodo, students can upload any file formats like MS-Word and MS-Power-Point.
- Editing an assignment: After uploading, if students find a mistake/error, they can edit that specific written part of assignment.
- Grading assignments: Grading assignments is used for giving marks or grades to students for their work. Teachers can view student's work, give them a grade, post a comment about their assignment as feedback. If the teacher makes a mistake in grading, he/she can always change the marks/grade and assign a new grade. The student will be alerted immediately about the revised comments and the grades on the app when they are connected to an internet service provider.

Moodle (Modular Object-Oriented Dynamic Learning Environment):

Moodle is a learning management system designed to provide teachers, administrators and students to create personalized learning environments. It allows posting of timetables, lecture notes and reading lists to course pages, providing a constant and easily accessible reference or systematic learning schedule for students. It also offers a number of interactive tools, to get students engaged in course content and for collaborating with their peers. One of the interesting features of Moodle is that the digital learning community can use it in over 90 languages like in English, Hindi, Tamil and other regional languages.

> "Moodle was built around an idea of learning that happens when a group of people constructs things for one another, creating, collaboratively, a small culture of shared artifacts with shared meanings. Moodle makes available many resources (web pages, books, files, links and so on) and activities (forums, assignments, quizzes, lessons, databases, glossaries, and so on) to support teaching and learning, but what can distinguish working with these from paper and pencil work is the way we explore the possibilities of computers and the Web to articulate multimedia elements with text." [Fernandes, 2009. p 8-9]

The relative advantages of digital learning via Moodle over traditional classroom can be listed as follows:

- The Moodle app supports students at any time of the day, which is especially useful during revision periods.
- It provides students with a solution, who have difficulty taking notes about key course information because their first language is not English.

- It allows for coursework to be submitted online from anywhere.
- It promotes collaborative learning and the creation of learning communities.
- When a student posts doubts or queries, Moodle has a friendly environment which connects many teachers around the globe to answer these queries and help a remotely situated student.
- Using Moodle, communicating in real-time, using text, audio, and video and creating an online real-time classroom is possible (Fernandes, 2009)

The only limitation of Moodle is that only an administrator can add teachers and give them permission to handle the course and define roles for both students and teachers. Both the administrator and teacher can add students in Moodle thereafter. For primary enrolling in Moodle everyone has to contact the administrator by providing basic information like names, e-mails and phone numbers.

Teachers' role in Moodle begins once the administrator hands over the charge to them. Teachers can do almost anything within a course, including adding or changing the activities and grading the students. By default, teachers can also assign a 'non-editing teacher role' and a 'student role' to other users. A student, in Moodle, can participate in course activities and view resources but cannot change or see the class gradebook. They can see their own grades if the teacher has partially allowed this. When a student first joins Moodle, they can see all the available courses. Once they have enrolled into at least one course, then they can see their own course in the 'My Courses' section and work accordingly on given assignments and interact with peers and teachers over pertinent learning difficulties related to the course they have joined.

Hence, the app versions of these Learning Management Systems have redefined the way teaching and learning takes place in the digital era. Several mobile learning app-versions of Edmodo and Moodle are available for various mobile operating systems like Android, Windows, and iOS. Accessibility and availability of teachers to students and vice-versa has extended beyond conventional classroom horizons into virtual time and space with such mobile digital innovations.

Conclusion:

Edmodo and Moodle apps under the umbrella of M-learning, provide free and secure educational networks which may be utilized by teachers to create and manage online classroom communities as well as enable learners to connect and work with their classmates and teachers, at everyplace and at all times. Parents can also participate in building a learning community like never before - to monitor children's day-to-day progress using these apps. Therefore, an advanced-participatory and, collaborative approach to learning can only be possible through digital learning platforms like Edmodo and Moodle in this digital world of diminished space and time. Portable technologies that have changed the notion of a fixed location of curriculum transaction within classrooms, focuses on the concept of "mobility of learners" (Pradeep Kumar, 2010) in this dynamic age and knowledge society which has seen an upsurge of information and communication technology.

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41. LEARNING AND TEACHING IN THE MODERN WORLD

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Abstract

This article outlines a contemporary and comprehensive theory of learning that has been developed to match the modern concept of competence and therefore includes not only cognitive learning and teaching. but also emotional and social dimensions. In relation to this, different kinds of learning are discussed and a framework is suggested comprising four learning types, including, as the most complex, transformative learning. In this paper today how to learn is beginning much more important on teaching and learning do not learn much in situations that require them to be passive, and reflective learners do not learn much in situations that provide no opportunity to think about the information being presented.

So a creating new system of teaching and learning processes of digital revolution and effective for learning skills. A Part of teaching methodologies designed to foster creative reflection is the type of classroom environment

which the teacher helps to creating a new modern technology and developed in a practice-based knowledge of educators today's information the students is surely a key to providing enriching experiences using learning technologies we currently approach the enrichment of teaching and learning using ICTs and learning technologies that can enhance the functional aspects of the entire higher education ecosystem.
Key Words: *Teaching and learning, Educational instructions, Modern Technology.*

Introduction

Many educators and researchers believe that information technology could bring innovation on traditional educational instructions. Teachers and technologists are searching for new and innovative ways to design learner-centered learning environments effectively, trying to engage learners more in the learning process. Claims have been made that online games have the potential to teach, train and educate and they are effective means for learning skills and attitudes that are not so easy to learn by rote memorization.
There has been a lot of research done in identifying the learning effectiveness in game based learning. Learner characteristics and cognitive learning outcomes have been identified as the key factors in research on the implementation of games in educational settings. In the process of learning a language through an online game, there is a strong relationship between the learner's prior knowledge of that language and their cognitive learning outcomes. For the people with prior knowledge of the language, the learning effectiveness of the games is much more than those with none or less knowledge of the language.

Today's students interact and use information in radically different ways from the pre-Internet generation. They are heavily engaged in new social networking tools such as BeBo, MySpace and Flickr. These students often display a high level of competence with information technology. They are becoming increasingly familiar with generating their own content through the use of blogs, wikis, YouTube and so on.

Changing Roles and Educational Developments

Changing Roles and Identities of Educational Developments it is no surprise that educational developer roles are often undertaken by individuals who have not had a traditional academic pathway. For example, some educational developers are academics who have stepped temporarily but wholeheartedly from their disciplines into the teaching and learning field, building on their own experiences as teachers to mentor others. Others are employed as full-time educational developers, a role which is sometimes defined as administrative and sometimes as academic. As a result, educational developers are often accustomed to and adept at variation. For this reason, they are often ideally suited to leading change both institutionally and nationally. For some educational developers, however, there may be a gulf between their defined roles and their identities.

Assessments that stimulate creativity

Much of the professional literature appears to lean towards creative thinking being a challenging endeavor. An integral part of teaching methodologies designed to foster creative reflection is the type of classroom environment which the teacher helps to create. What is needed are teachers who engage their students in meaningful activities – ones which incorporate students' unique interests, abilities, backgrounds and community needs. Underpinning the development of creative thinking is the need for cultural change in higher education so that the value of creativity is more accepted (Wisdom, 2006).

We argue that teachers need professional development opportunities to develop the knowledge and skills to nurture creativity in their students. Teachers need to understand and appreciate their own creativity and to recognize it as a fundamental part of their professional development. Each student has some innate creative potential, which can be enhanced by teachers who are aware of and knowledgeable about proven and effective ways to teach creative behavior. Accredited teacher preparation programmes are on the increase in the higher education sector and are supported by the dual use of the teaching selection (Donnelly, 2006)

The selection has the ability to embrace risk and reflection and create the conditions that promote teachers' creativity. The reflective processes of selection development can be as important as the final product. Ideas and beliefs about what constitutes good teaching practice change personal experience of both teaching and learning. Through these experiences we learn to identify the most effective and creative teaching methodologies, what works for us as teachers and what helps us as learners. Teachers who create their own digital teaching portfolios can become aware of the potential of the technology to enable the creative thinking process. However, is clear: it is vital that academics nurture and celebrate their own creativity if they are to model creative processes for their students and if they are genuinely to convey their enthusiasm for creative Endeavour's to their students.

Teaching and Learning Style factor into the planning

Students learn in many ways— by seeing and hearing; reflecting and acting; reasoning logically and intuitively; memorizing and visualizing and drawing analogies and building mathematical models; steadily and in fits and starts. Teaching methods also vary. Some instructors lecture, others demonstrate or discuss; some focus on principles and others on applications; some emphasize memory and others understanding. How much a given student learns in a class is governed in part by that student's native ability and prior preparation but also by the compatibility of his or her learning style and the instructor's teaching style.

Mismatches exist between common learning styles of engineering students and traditional teaching styles of

engineering professors. In consequence, students become bored and inattentive in class, do poorly on tests, get discouraged about the courses, the curriculum, and themselves, and in some cases change to other curricula or drop out of school. Professors, confronted by low test grades, unresponsive or hostile classes, poor attendance and dropouts, know something is not working; they may become overly critical of their students (making things even worse) or begin to wonder if they are in the right profession.

Teaching the Lesson structure

Early CASE lessons focus on: classification, scale, ratio, proportion, probability, variables, fair testing. The teacher sets up good learning-context and intervenes to guide the learners toward the learning goal. A mediator asks probing questions: "What do you think?", "Which one will heat up most?" "What's happening to the atoms?" gradually leading the learners to discover the answer for themselves. The mediator can offer clues which direct the learner, improving the chance of successful thinking.

Lessons which develop abstract thinking directly have the following structure. Setting the scene Concrete preparation serves a similar purpose to the "bridging" section and links the activity to current knowledge, explains the task and checks vocabulary.

Challenge must be set just above the current level of secure knowledge - hard enough to be a challenge, but not so hard as to make the learners switch off. In a science lesson this can take the form of a demonstration with an unexpected effect. In English it could be reading a text which has an implied meaning.

Group work The teacher cannot be the mediator for every child in the class. If pupils work in groups and discuss their ideas (social construction) there are several benefits: group member's act as mediators for each other, suggesting solutions, trying out ideas. Individuals feel less vulnerable and more to participate. Random ideas from group-members act as the clues offered by the mediator. Plenary once the groups have solutions, the class shares ideas. The teacher does not give the answer but asks a group for a solution, then asks another if they agree or disagree and why. The discussion continues until there is agreement. The teacher leads the group towards the answer through questioning.

Bridging Knowledge in isolation from the learner's secure knowledge is usually lost. The learner needs to bridge new learning to existing experiences. The lessons conclude with a discussion about where ideas could be used in everyday life.

The impact of instructional technologies and creating online course

The book provides a view of the many ways in which information technologies can be configured to suit the diverse range of situations in which learning can take place, including descriptions of emergent approaches such as those afforded by social networking technologies and collaboration tools. Also flags issues of diversity, as well as the challenges and opportunities for ICT use in the developing world. The book provides insights into key design issues in the creation of online courses, including matters of instructional design, assessment and evaluation, diversity, accessibility, quality assurance, and the impacts associated with making technological choices in an instructional context.

Online learning has had a significant impact on mobility and transfer: students can and do access high-quality courses from all over the world. However, this virtual mobility creates challenges for post-secondary institutions. The articulation agreements used by institutions and systems to generate and record transfer credit arrangements have traditionally been negotiated locally and have concerned the assessment of courses offered in the familiar face-to-face classroom environment. Few resources exist that will assist practitioners at sending institutions to ensure the successful articulation of their online courses.

It is the output of ongoing discussions among practitioners who participated in an online community of interest that stimulated dialog among and between interest groups that shared a common vision of providing best practice knowledge for the benefit of their peers. This is a book that had its roots in the organic discussions of practitioners and became a larger work through their collective intention to disseminate their knowledge more broadly.

Conclusion

The digital environment is transforming teaching and learning in our schools. We are committed to taking full advantage of this opportunity to help our schools become world leaders in digital education systems through changes to their infrastructure, the ability to harness these technologies in the design of online classrooms can impact the engagement of teaching and learning by creating more options for learners to connect with course content as well as to other learners. In this paper identifies several emerging technologies, describes how they will impact education, and explores the challenges that could arise due to the nature of current technology adoption models in education. And the digital world has revolutionized the whole system of education particularly teaching and learning process is developed in all institutions.

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42 கணினியும் இணையமும்-ஒரு பார்வை

முனைவர் சீ.மாலினி, உதவிப் பேராசிரியர், தமிழ்த்துறை, கிருஷ்ணசாமி மகளிர் அறிவியல், கலை & மேலாண்மையியல் கல்லூரி, கடலூர்

இன்றைய அறிவியல் தகவல் வளர்ச்சி உலகத்தை ஒரு சிற்றூராக மாற்றிவிட்டது. தகவல் தொழில் நுட்பத்துறையில் ஏற்பட்டுள்ள மிகப்பெரிய முன்னேற்றம் நம்வாழ்வில் மலர்ச்சியை ஏற்படுத்தி வருகிறது. தகவல் தொடர்புச் சாதனங்களால் ஒரிடத்தில் நடைபெறும் நிகழ்வுகளைக் கூட உடனுக்குடன் மற்றோரிடத்தில் அறியமுடிகிறது. இவற்றில் கணினியின் பங்கு அளப்பரியது. இருபதாம் நூற்றாண்டின் இணையற்ற கண்டுப்பிடிப்பான கணினி, சில நொடிகளில் மில்லியன் கணக்குகளைச் செய்துகாட்டும். இதை முறையாக இயக்கினால் மனித மூளையைப்போன்று நுண்ணறிவுத் திறனோடு வேலைச்செய்யும். கணினி இன்று எல்லாத் துறையகளிலும் பயன்படுகிறது.

கணினி (computer) என்பது கட்டளைத் தொகுதிகள் (instruction sets) அல்லது நிரல்களின் (programs) மூலம் சில பணிகளை அல்லது கணக்குகளைச் செய்யும் இயந்திரம். முதன்முதலில் 1940களில் அறிமுகப்படுத்தப்பட்ட முழுமையான எலக்ட்ரானிக் கணினிகளில் பிரம்மாண்டமாக இருந்தன; அவற்றில் பலர் இணைந்து பணிபுரிய வேண்டியிருந்தது. அந்தத் தொடக்க காலத்துக் கணினிகளுடன் ஒப்பிடும்போது இன்றைய கணினிகள் பிரமிப்பூட்டுகின்றன. அவை பழைய கணினிகளை விட பல்லாயிரம் மடங்கு வேகமாக இயங்குவது மட்டுமல்ல, அவற்றை உங்கள் மேஜை மேல், மடி மேல், அல்லது சட்டைப் பைக்குள் கூட வைக்கலாம்.

பொதுவாக கணினி இயந்திரம் - வன்பொருள் (hardware) மற்றும் மென்பொருள் (software) இடையிலான பரிமாற்றத்தின் மூலம் இயங்குகிறது. வன்பொருள் (hardware) என்பது கணினியில் நீங்கள் பார்க்கவும் தொடவும் முடியும் பாகங்களைக் குறிக்கிறது; இதில் கணினிப் பெட்டியும் அதில் உள்ள அனைத்தும் அடங்கும். வன்பொருட்களில் மிக முக்கியமானது உங்கள் கணினியில் உள்ள மையச் செயலகம் (CPU) அல்லது நுண்செயலி (microprocessor) என்று அழைக்கப்படும் மிகச் சிறிய ஒரு செவ்வக வடிவச் சில்லு (tiny rectangular chip). இதுதான் உங்கள் கணினியின் மூளை (brain) போல – கட்டளைகளைப் புரிந்துகொண்டு கணக்கிடுவது இந்தப் பகுதிதான்.

கணினி வன்பொருள் சாதனங்கள்:

கணினி வன்பொருள் சாதனங்கள் எனப்படுவது, உங்கள் திரையகம் (monitor), விசைப்பலகை (keyboard), சுட்டி (mouse), அச்சுப்பொறி (printer), மற்றும் பிற வன்பொருள் (hardware) உபகரணங்கள் பெரும்பாலும் வன்பொருள் சாதனங்கள் (hardware device) அல்லது சாதனங்கள் என்று அழைக்கப்படுகின்றன. இந்த வன்பொருள் சாதனங்கள் ஆனது கணினியில் நிறுவியுள்ள கணினி இயக்கமுறைமையை (computer operating system) தொடர்புக்கொண்டு கட்டளைத் தரவுகளைப் பறிமாறிக்கொள்கின்றன. எனவே இயக்கமுறைமை (operating system) இல்லாமல் வன்பொருள் சாதனங்கள் கணினி அமைப்பில் செயல்படுவது என்பது சாத்தியம் இல்லாத ஒன்றாகும்.

கணினி மென்பொருள் கோப்புகள்:

மென்பொருள் (software) என்பது, வன்பொருளு(hardware)க்கு வேலை கொடுக்கும் கட்டளைகளை (instruction sets), அல்லது நிரல்களை (programs), குறிக்கிறது. உங்கள் கணினியில் கடிதங்கள் எழுதப் பயன்படுத்தும் சொற்செயலி (word processing program) ஒரு வகை மென்பொருள்தான். இயக்க முறைமை (Operating system) என்பது உங்கள் கணினியையும் அதனுடன் இணைக்கப்பட்டிருக்கும் சாதனங்களையும் நிர்வகிக்கும் மென்பொருள். Windows -உம் Mac OS -உம் பரவலாக அறியப்பட்ட இரண்டு இயக்க முறைமைகள் (operating systems).

கணினியின் வரலாறு:

1946இல் அறிமுகப்படுத்தப்பட்ட ENIAC (Electronic Numerical Integrator and Computer) என்ற கணினிதான் உலகின் முதல் பொதுப் பயன்பாட்டுக் கணினி (first general-purpose electronic computer). அது அமெரிக்க ராணுவம் பீரங்கி குண்டுகள் செல்லும் பாதையைக் கணக்கிடுவதற்காக உருவாக்கப்பட்டது. ENIAC பிரம்மாண்டமான ஒரு கணினி. அதன் எடை 27,000 கிலோகிராமுக்கு (60,000 பவுண்டுகளுக்கு) மேல் இருந்தது; அது ஒரு பெரிய அறையையே நிரப்பக்கூடியதாக இருந்தது. தரவைச் செயலாக்க (To process data), ENIAC சுமார் 18,000 வெற்றிடக் குழாய்களைப் (vacuum tubes) பயன்படுத்தியது. இதில் ஒவ்வொரு குழாயும் ஒரு சிறிய பல்பின் அளவு இருக்கும். அந்தக் குழாய்கள் எளிதில் தீர்ந்துபோனதால் (burned out) தொடர்ந்து மாற்றிக்கொண்டிருக்க வேண்டியிருந்தது.

கணினியின் தோற்றமும் வளர்ச்சியும்:

கணக்கிடுவதற்காக முதலில் எளிதான மணிச்சட்டம் உருவாக்கப்பட்டது. கணினி உருவாக இதுவே முதல் படிவமாக அமைந்தது. பாரிசு நகரை சார்ந்த பிளேஸ் பாஸ்கல் என்னும் அறிஞர் கணக்கிடும் கருவியைக் கண்டறிந்தார். கி.பி. 1833 இல் இங்கிலாந்து

நாட்டைச் சார்ந்த சார்லஸ் பாப்பேஜ் கணினியை முதலில் வடிவமைத்தார். ஆங்கிலக் கவிஞர் பைரனின் மகள் லேடி லவ்லேஸ் என்பவர், கணிதச் செயல்பாட்டிற்குத் தேவையான கட்டளைகளை வகுத்தமையால், முதல் செயல் திட்ட வரைவாளர் எனப் போற்றப்பட்டார்.

கணினியின் வகைகள்:

தகவல் தொழில்நுட்ப வளர்ச்சியின் விளைவாகக் கணினியிலும் புதுமையான அமைப்புகள் தோன்றியவண்ணம் உள்ளன. இன்றைய நிலையில், பல்லூடக வசதிகொண்ட கணினி, மடிக்கணினி, கையடக்கக் கணினி முதலிய கணினிகள் பயன்பாட்டிற்கு வந்துவிட்டன. கணினியைப் பயன்படுத்துவோரின் தேவை அதிகரிக்க அதிகரிக்க கணினியின் வளர்ச்சியிலும் புதுமைகள் புகுத்தப்பட்டு வருகின்றன. இதனுடன் இணையத்தளமும் இணைக்கப்பட்டுள்ளதால் தேவைப்படும் தகவல்களை உடனுக்குடன் பெறமுடிகிறது.

இணையம்:

இணையம் என்னும் வடிவத்திற்கு வித்திட்டவர் ஜான் பாஸ்டல் என்னும் அமெரிக்கராவர். உலகெங்கும் உள்ள கணினிச் செயதிகளை இணைக்க, இணையம் பயன்படுகின்றது. இலக்கியம், அறிவியல், வானியல், வரலாறு, புவியியல், கணிதம், திரைப்படம் என எண்ணற்ற துறைகள் பற்றி இணையத்தின் வாயிலாகச் செய்திகளை அறிய முடிகிறது.

கணினியுடன் இணையத்தள இணைப்பானது படிப்படியாக வளர்ச்சி அடைந்தது. 1960 ஆம் ஆண்டில், ஒரு கணினியிலிருந்து மற்றொரு கண்னிக்குச் செய்தியை மாற்ற மின்காந்த நாடாவைப் பயன்படுத்தினர். இது மிகுந்த காலச் செலவை ஏற்படுத்தியது. இதற்காக மாற்றாக, ஒரு கட்டத்திற்குள் இருக்கும் கணினிகளை எல்லாம் கம்பிச்சுருளுடன் இணைக்க ஈதர்நெட் அட்டை என்னும் சிறுபலகையைப் பொருத்திப பயன்படுத்தினர். இந்த இணைப்பு குறும்பரப்பு வலைப்பின்னல் எனப்பட்டது. இதனைத் தொடர்ந்து ஒரு வட்டாரத்துக்குள் உள்ள கணினிகளை இணைத்தனர். இஃது அகன்ற பரப்பு வலைப்பின்னல் கொண்டது. இந்த வலைப்பின்னல் வழியாக உலகம் முழுவதும் உள்ள கணினிகளை ஓரளவுதான் இணைக்க முடிந்தது. முழுமையான இணைப்பைப்பெறச் செயற்கைக்கோள்வழி இணைப்பினைப் பயன்படுத்திப் புவியைச் சுற்றி, நாடுகளின்மீது வலம்வரும் விண்வெளிக்கலண்களுக்கு இடையே இணைப்பு ஏற்படுத்தப்பட்டது. இந்த உலகம் முழுமைக்கான வலையமைப்பு இணையம் எனப் பெயர் பெற்றது.

சுவிச்சர்லாந்து நாட்டைச் சார்ந்த பிம்பெர்னர் லீ என்னும் இயற்பியல் வல்லுநர், 1989 ஆம் ஆண்டு இணையதளத்திற்கு உலகளாவிய வலைப்பின்னல் எனப்பெயரிட்டார். இதனை வையக விரிவு வலை எனவும் ஆழைக்கலாம். இவ்வலையமைப்பு, பலசெய்திகளை அழியாமல் பாதுகாக்க உதவுகிறது.

இணையத்திற்குத் தேவையானவை:

பேரூர் முதல் சிற்றூர் வரை இணையத்தள வசதிகள் கிடைக்கின்றன. இணையத்தளச் சேவையைப் பயன்படுத்தத் தேவையான பொருள்களாவன.

1. கணினி
2. தொலைபேசி
3. இணையச் சேவை வழங்குநர்
4. மாற்றி

5தொடர்பு மென்பொருள்

இவற்றைக் கொண்டு இணையத் தொடர்பைப் பெறலாம். இணையத்தைப் பயன்படுத்த, இணையச் சேவைக்கு உரியவரிடம் தனிக்கணக்குத் தொடங்குதல் வேண்டும். பின்பு, கணினியை இணையத்தளத் தடத்தில் இணைத்தல் வேண்டும்.

இணைய இணைப்பு வகைகள்:

தொலைபேசி வழியாகக் கணினியையும் மாற்றியையும் இணைத்துப் பயன்படுத்தும் முறை, தொலைபேசி இணைப்புச் சேவையாகும். இம்முறையில் விரைவும் வசதியும் வசதியும் குறைவாக இருந்தமையால், புதிய அணுகுமுறை தேவைப்பட்டது. வையக விரிவு வலை செயல்படுவதைக் கொண்டு, இணைய இணைப்பு நான்கு வகையில் கிடைக்கின்றது. உறுப்பினர் எண்ணிலக்க இணைப்பு, கம்பி வடமாற்றி, செயற்கைக்கோள் சேவை, கண்ணறைச் சேவை என்பன ஆகும்.

கணினிவழிக் கல்வி:

கணினியைப் பயன்படுத்திக் கற்கும் கல்வியே கணினிவழிக் கல்வி. வீட்டில் இருந்தபடியே தமிழ், ஆங்கிலம், கணிதம், அறிவியல், வானியல், வரலாறு, புவியியல், பொது அறிவு, நடனம், கைவேலைப்பாடு என எந்த ஒன்றையும் கற்றுக்கொள்ள இயலும். தொலைதூரக் கல்வியை இணையத்தின் உதவியால் கணினிவழியாகப் பலரும் கற்று வருகின்றனர்.

இணையத்தின் வாயிலாக ஒருவருக்கு ஏற்படும் ஐயங்கள், சிக்கல்கள், தேவைகள், வழிகாட்டுதல்கள் முதலியவற்றுக்கான தீர்வுகளைப் பெறவியலும். தீர்வுகளைப்பெற மின்னஞ்சல் முகவரி உதவுகிறது. வீட்டிலிருந்தபடியே நேருக்குநேர் தொடர்புகொண்டு கற்கும் வாய்ப்பும் இன்று கிடைக்கின்றது.

கணினிவழியாக மொழிக்கல்வியும் பெறவியலும். மொழியின் அடிப்படைத் திறன்களான கேட்டல், பேசுதல், படித்தல், எழுதுதல் எனத் தொடங்கி உயர்நிலைத் திறன்களான கதை, கட்டுரை, செய்யுள், பாடல், கடிதம். சுருக்கி வரைதல், விரித்தெழுதுதல், குறிப்பெடுத்தல், அகராதி தேடல் என அனைத்தையும் இணையம் வாயிலாகக் கறக இயலும்.

உலகெங்கும் வாழும் தமிழர்க்கும் தமிழறய விழைவோர்க்கும் இவ்வாய்ப்பினைத் தமிழ் இணையப் பல்கலைக்கழகம் வழங்குகிறது. தமிழ் என்னும் இணையத்தளம் தமிழ் எழுத்துகளை எழுதவும், ஒலிக்கவும் கற்றுத் தருகிறது.

கணினியின் பயன்கள்:

கணினி, நம் அன்றாட வாழ்வில் பயன்படும் இன்றியமையாத கருவியாகிவிட்டது. வணிகம், அறிவியல் தொழில்நுட்பம், தொலைத்தொடர்பு, கல்வி, மருத்துவம், விண்வெளி, பாதுகாப்பு முதலிய பல்துறைகளில் பயன்பட்டு வருகிறது. சொல் விளையாட்டு, பொறியியல் வரைபடம் வரைதல், பொழுதுபோக்கு விளையாட்டுகள், கணிதத் தேற்றங்களின் தீர்வுகள் போன்ற அரிய பணிகளையும் கணினி எளிமையாகச் செய்கிறது.

பேருந்து நிலையங்கள், வங்கிகள், கல்வி நிலையங்கள், உணவகங்கள் என எவ்விடத்தும் கணினியின் ஆட்சியே நிலவுகிறது. அது வேலைவாய்ப்புகளை விரிவுபடுத்தி, மக்களின் வாழ்க்கைத்தரம் உயரத் துணை செய்கிறது.

உள்ளங்கையில் உலகம்:

தொலைத்தொடர்புத் துறையில் ஈராயிரம் ஆண்டுகளில் ஏற்பட்ட முன்னேற்றத்தை விடக் கடந்த இருபதாண்டுகளில் ஏற்பட்டுள்ள முன்னேற்றம் பல நூறு மடங்காகும். இன்று ஒருவரை நேரடியாகப் பார்க்காமலே மின்னனுத்தகவல் வாயிலாகத் தொடர்பு கொள்ள முடிகிறது. வீட்டிலிருந்தபடியே உலகத்தைப் பார்க்க, பழக, மகிழ வாய்ப்பைப் பெறவும் இணையம் உதவுகிறது. கடந்த இருபதாண்டுக் கணினிப் பயணத்தில் இணையத்தின் பங்கு மிகச் சிறந்தது என்றே சொல்லவேண்டும். எனினும் கணினி வல்லுநர் பில்கேட்ஸின் கூற்று, இங்கு நினைவிற் கொள்ளத்தக்கது.

கணினியின் பயன்பாடுமிக்குள்ள இந்தக் காலத்தில், தொழில்நுட்ப உத்திகள் அனைத்தையும் பயன்படுத்திக் கணினிவழியாகத் தேவைப்படும் அனைத்துத் தகவல்களையும் பெறமுடிகிறது. இந்நூற்றாண்டின் இணையற்ற கண்டுபிடிப்பான கணினி, அறிவை விரிவு செய்வதற்கும் உலகத் தொடர்பிற்கும் சிறந்த வாயிலாகத் திகழ்கிறது. அறிவியல் தொழில் நுட்ப வளர்ச்சியின் புதுமைகளான கணினியும் இணையத்தளமும் தொலைத்தொடர்புக் கருவிகளும் உலகத்தையே நம் உள்ளங்கையில் கொண்டு வந்துள்ளன

43. CREATING EFFECTIVE E-LEARNING AND TEACHING

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Abstract

A structured search of library databases revealed that research examining the effectiveness of e-Learning has heavily increased within the last five years. After taking a closer look at the search results, the authors discovered that previous researchers defined and investigated effectiveness in multiple ways. At the same time, learning and development professionals within public and private organizations are increasingly being asked to prove the effectiveness of their learning and development.

The most common way to measure effectiveness is quantitatively with pre- and post-tests. This paper includes an empirical study of an e-Learning solution for science teachers (K–12) which serves as a valuable addition to the findings of the literature study. The study suggests that it is difficult to use e-Learning to improve teaching performance, as participating teachers can apply several strategies to avoid substantially changing their work-related practices. Furthermore, the study shows that only using the fulfillment of pre-defined learning objectives as an effectiveness parameter does not allow developers and researchers to see unexpected and unintended changes in practice that occur as a result of the e-Learning program. ***Keywords:*** *Randomized, Comparative methodology, Democratization and scalability, Persistence.*

Introduction

The quantitative meta-reviews aimed to document the effectiveness of e-Learning by consolidating the data of a number of quantitative studies. The mixed-method meta-review mentioned above describes the state of the research, explains how the studies evaluate different outcomes and discusses different aspects of learning effectiveness. This is somewhat similar to the present paper, which also applies a mixed-method methodology in an integrative manner. However, many more research articles are considered in this paper due to broader selection criteria. Hence, this paper is not concerned with re-investigating how effective e-Learning is, but rather with understanding the definitions, measurements and factors promoting e-Learning effectiveness. The authors aimed to obtain a broad foundation of high-quality papers, from which a large but not pre-defined number was chosen for further investigation. Papers were chosen using a strategic randomized approach based on a purposive sample size, then analyzed based on the concept of theoretical saturation.

Effective of Learning

- The literature study reveals that the most common way to measure effectiveness is through quantitative pre- and post-testing. To come to an understanding of which definitions of effectiveness are most used in particular kinds of studies, the effectiveness code was correlated.
- It might be assumed that qualitative studies would use several definitions of effectiveness, but this was not the case. Instead, these studies tended to use only one or two of the 19 definitions, whereas quantitative studies used significantly more. This could be because qualitative and mixed methods studies aim to explore a single concept

in dept, and the intentions are often to understand the 'why's' of such a concept, which requires a significant amount of time and resources. On the other hand, quantitative research uses definitions as a set of variables constituting effectiveness, thus necessitating the use of several definitions.

- The reason for the distribution of research methods in this literature study could be due to both a publication and policy bias. Writing thorough descriptions of the 'why's of qualitative research requires more space than reporting means and standard deviations.

Importance of learning effective

- Finding statements to reject content, which means that the teachers seemed to be searching for single statements in the e-Learning content that they could use to prove that application to practice, was not possible. Some stated that they preferred to teach as the e-Learning suggested, but their work context would not allow for it.
- Modifying content to make change less demanding, which means that the teachers consciously or unconsciously modified the content to work similarly to their current practices, allowing them to state that they were already teaching this way, or changing the content to become easily applicable. This finding is in line with Branford and Schwartz (1999), who discovered that people often modify a transfer situation until it becomes similar to something they know (Lobito, 2006).
- Pinpointing content that can be easily implemented, which means that the teachers used elements of the content that they could easily apply to their teaching without changing it fundamentally.

Face-Face Learning and Teaching

- Many of the studies analyzed in this integrative review value e-Learning based on how well a given e-Learning solution accommodates for individual characteristics (experience and motivation) or the extent to which the solution provides opportunities for interaction and practice and to a smaller extent whether or not the necessary

  as discussed, approximately half the papers included in the literature review use a comparative methodology.
- This means that the effectiveness of e-Learning is largely defined based on how well the e-Learning performed, compared to traditional face-to-face teaching with the same content. Thus, the same definitions of effectiveness are used for both e-Learning and face-to-face teaching, and e-Learning must outperform face-to-face teaching in order to be considered effective. With this in mind, it becomes important to take another critical look at the key factors, since the comparative research methodology affects their perceived importance. This means that some of the factors like interaction and
- practice may have surfaced as critical during the review, because these factors illustrate the strong sides of face-to-face teaching.
- A given e-Learning solution must, therefore, entail these factors to be effective when compared to face-to-face teaching. But do we want e-Learning to be more like face-to-face teaching? Is the most effective e-Learning an online replication of the classroom setting? What would happen if policy makers and researcher stopped asking if e-Learning is as good as what we currently have with face-to-face teaching. Within recent years, massive open online courses (MOOCs) have received profound attention within the field of e-Learning. MOOCs offer free courses, competence development and even certification. They are often considered to be the promised land of education, democratizing education through scalable technology. As a stand-alone solution, MOOCs provide opportunities for reflecting on and constructing new knowledge, but often they entail a minimum amount of live interaction. Many MOOCs continue to be online replications of classrooms primarily consisting of video lectures, multiple-choice quizzes, Q&As and more informal after-class discussions in online discussion forums.
- So are MOOCs ineffective because little interaction is provided compared to face-to-face teaching? And if not, is interaction not a key factor in e-Learning effectiveness? We argue that interaction is indeed essential to learning retention and learning transfer. An educational design applying collaboration and interaction with peers and a facilitator (the teacher or instructor) can provide a purposeful space for reflecting on the practice as well as an empathetic customization of the subject matter, which no automatic process is capable of yet. Hence, when the overarching objective is to design e-Learning which increases learning retention and work performance, the effectiveness of e-Learning may very well be evaluated by the quality of the interaction provided. But what if the overarching objective is different than the definitions provided here, are missing more e-Learning specific definitions that are independent of face-to-face teaching, such as democratization and scalability? And as a last mental exercise, what if we started evaluating face-to-face instructions.

Effective of Teaching

- North Carolina's Race to the Top (R2T) proposal, teacher effectiveness has been defined rather traditionally. Granted, the proposal focuses on results for students – and this is a good thing. However, the evaluation instrument being used examines five broad standards – leadership, establishment of a respectful environment, content knowledge, facilitation of learning, reflection on practice – with a sixth standard on student growth measures [Education Value-Added Assessment System (EVAAS) created by Bill Sanders] to be added as R2T is implemented. But according to those who teach, and do so effectively, much is missing.
- The NBCTs of North Carolina were clear: Current standardized tests, such as those that will be used in EVAAS, do not pass muster on assessing teaching effectiveness. Only four percent of the NBCTs present at the Summit believe that the state's standardized tests

are the best way to determine who is or is not a good teacher.

- Standardized tests are designed to measure students' ready retrieval of a rather narrow band of knowledge, and many of them do not capture the growth students demonstrate in other more accurate assessments. Standardized tests can yield necessary and useful data, but participants pointed out that the current ones in North Carolina do not measure the following: student motivation, intellectual readiness, persistence, creativity, or the ability to apply knowledge and work productively with others. Yet these are important qualities engendered and nurtured by effective teachers, and they have everything to do with student learning and success in the global marketplace. As one NBCT noted, "We need to place a premium on teachers who help students become globally competent and who can participate as informed citizens in our political process.

Recommendation of learning and teaching:

Based on the analyses in the previous chapters, the following recommendations are proposed:

- There are many understandings of e-Learning effectiveness. Be sure to clarify what would make your solutions effective. Consider using the list of definitions for inspiration.
- Do not measure effectiveness simply for the sake of measuring. Know what measurements will give you the documentation your stakeholders require and the answers you need to continuously improve your solutions.
- When designing e-Learning, consider the key factors that impact e-learning effectiveness.
- Be critical and consider whether or not your face-to-face and e-Learning solutions should use different definitions of effectiveness. Aim to compare your solution to other solutions using the same definitions of effectiveness.

Conclusion:

The authors highlighted the benefits of reflection on and clarification of the way in which these definitions are used in research and practice. The paper discovered that the research is largely applying quantitative and comparative methodologies. In this regard, this paper suggests that applying purely quantitative measures to fulfill predefined learning objectives does not allow researchers and practitioners to discover unexpected and unintended transfers to practice and presents potential sources of error. Including open-ended qualitative questions in surveys can substantially improve the validity of such approaches; the empirical study and some of the analyzed papers show that self-assessment can give researchers and designers quality feedback on the effectiveness of the e-Learning solution. To understand what makes e-Learning solutions effective, this paper analyzed factors promoting the effectiveness of e-Learning. These factors were categorized according to the context in which the e-Learning solution was used, the artifact and the individuals that used the artifact. Subsequently, further categorization into key factors resulted in a model to guide e-Learning and teaching.

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44. கற்றல் கற்பித்தலில் இணையத்தின் பயன்பாடு

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கருத்துச்சுருக்கம

இணையத்தின் வருகை மனித வாழ்க்கைக்கு உதவிடும் கருவியாய் இருந்த நிலைமாறி மனித வாழ்க்கையையே மாற்றி அமைக்கும் திருப்பு முனையாய் ஆகிவிட்டது. பண்பாட்டு நடைமுறைகள், வாழக்கைச் சிந்தனைகள், அனறாட நடவடிக்கைகள் இவையனைத்தையும் அப்படியே புரட்டிப் போடும் வல்லமை பெற்றதாய் " இணையம் " விளங்குகிறது .

இணையமே கல்லூரியாய் , நூலகமாய் , கருத்தரங்காய் , வேலைவாய்ப்பு அலுவலகமாய் , அஞ்சல் நிலையமாய் , வானொலியாய் , தொலைக்காட்சியாய் , விளையாட்டு அரங்கமாய் விளங்குகிறது.பல்வேறு சேவைகள் இணையத்தில் கிடைக்கின்றன.தகவல்களஞ்சியங்கள்.மின்னஞ்சல் தொடர்பு உடனடிச் செய்திப்பரிமாற்றம் போன்ற கற்றல் கற்பித்தல் சேவைகள் உள்ளன.

தகவல் களஞ்சியம்

எண்ணிப்பார்க்க முடியாத அளவு தகவல்கள் இணையத்தில் சேமித்து வைக்கப்பட்டுள்ளன.அறிவுகளஞ்சியங்கள் இணையத்தில் சேமிக்கப்பட்டுள்ளன.

கலைகளஞ்சியங்கள், ஆவணங்கள் ஆலோசனைகள் என்னும் பல்வேறு வடிவங்களில் அவை சேமிக்கப்பட்டுள்ளன. பல்கலைக்கழகங்கள், ஆய்வுக்கூடங்கள், நூலகங்கள், பதிப்பகங்கள், தொண்டு நிறுவனங்கள் ஆகியவற்றின் வலையகங்களிலும் தகவல்கள் சேமிக்கப்பட்டுள்ளன.

கலைகளஞ்சியங்கள

அனைத்துவகைத் தகவல்களையும் அகரவரிசையில் அல்லது துறை வாரியாகத் தரும் நூலினைக் கலைக்களஞ்சியம் என்கிறோம். என்சைக்ளோபீடியா பிரிட்டானிகா மிகவும் செல்வாக்குப் பெற்ற கலைக்களஞ்சியமாகும். இதன் அண்மைக்காலப்பதிப்பு 32 தொகுதிகளைக் கொண்டது. 65 ஆயிரம் கட்டுரைகளின் 4 கோடியே 40 லட்சம் சொற்களைக் கொண்டது

24 ஆயிரம் விளக்கப்படங்கள் உள்ளன. 30 தொகுதிகளைக் கொண்ட என்சைக்யோபீடியா அமேரிக்கானா என்னும் கலைக்களஞ்சியமும் கட்டண அடிப்படையில் இணையத்தில் கிடைக்கிறது.

ஆவணக் காப்பகங்கள்

உலகின் மிகச்சிறந்த நூலகங்களில் சேமிக்கப்பட்டுள்ள நூல்களின் தொகுப்புகளை இணையத்தில் தேடிப்பெற முடியும். உலகப் புகழ்பெற்ற அனைத்துப் படைப்பாளிகளின் படைப்புகளும் இணைத்திலுள்ள ஆவணக் காப்பகங்களில் சேமிகபப்பட்டுள்ளன. எடுத்துக்காட்டாக வில்லியம் சேக்ஷ்பியரின் அனைத்துப் படைப்புகளும் என்னும் வலையகத்தில் கிடைக்கின்றன. வில்லியம் வேர்டஸ்வொர்தின் அனைத்துக் கவிதைகளையும் என்னும் வலையகத்தில் காணலாம். உலகப் புகழ்பெற்ற நூல்கள், படங்கள், நிகழ்படங்கள், பேச்சுரைகள், இசைப்பாடல்கள், கணிப்பொறி மென்பொருள்கள் சேக்கப்பட்டுள்ளன. என்னும் வலையகத்தில் இவற்றை இலவசமாகப் பெறலாம் .

மதுரைத்திட்டப்பணி

மதுரைத் திட்டப்பணி என்பது உலகளாவிய தமிழர்கள் ஒன்றுகூடி தமிழ் இலக்கியங்களின் மின்மதிப்புகளை உருவாக்கி அவற்றை இணையம் வழி உலகெங்கிலும் உள்ள தமிழர்களும் தமிழ் ஆர்வலர்களும் இலவசமாகப் பெற வசதி செய்யும் திட்டமாகும். இதன்படி சங்க இலக்கியங்கள் தொடங்கி இக்கால நூல்கள் வரை தமிழ் இலக்கியங்களின் மின் பதிப்புகள் இணையத்தில் சேம்க்கப்பட்டுள்ளன.

ஆலோசனை மையங்கள்

கல்வி, வேலைவாய்ப்பு தொடர்பான தகவல்களை அறிய ஆலோசனை மையங்கள் இணையத்தில் இருக்கின்றன.இணையத்தில் பெற்படும் ஆலோசனை மின் ஆலோசனை எனப்படும்.குறிப்பிட்ட சில கட்டண அடிப்படையிலும் வழங்கப்படுகின்றன.

தகவல் தேடல் -வலையகம

வலை உலாவியின் முகவரிப்பட்டையில் அந்த வலையகத்தின் முகவரியை உள்ளிட்டு இயக்கனால் வலையகத்தின் முகப்பு பக்கம் திறக்கும். சேமிக்கப்பட்டுள்ள தகவல்கள் தலைபபு வாரியாகப் பட்டியலிடப்பட்டிருக்கும். தேவையான தொடுப்பினை இயக்கினால் தகவல்பக்கம் திறக்கப்படும்

தேடுபொறி

தேடுபொறி வழியாக இணையத்தில் தகவலைத் தேடித்தருவதற்கென்றே தனிச்சிறப்பான மென்பொருள்கள் உள்ளன. அவை தேடுபொறிகள் என்று அழைக்கப்படுகின்றன.கட்டுரைகள், பாடங்கள், பாடல்கள், செய்திகள், நூல்கள் எனக்குறிப்பிட்ட வகைத்தகவல்களைத் தேடுவதற்கெனத் தனிச்சிறப்பான தேடுபொறிகளும் அனைத்துவகை தகவலுக்கும் பொதுவான தேடு பொறிகளும் உள்ளன.

முடிவுரை

அறிவுக்களஞ்சியம் முழுக்க இணையத்தில் கலைக்களஞ்சியங்கள், ஆவணக்காப்பகங்கள் என்னும் பல்வேறு வடிவங்களில் சேமிக்கப்பட்டுள்ளது. என்சைக்ளோபீடியா பிரிட்டானிகா மிகவும் செல்வாக்குப் பெற்ற கலைக்களஞ்சியமாகும். என்சைக்யோபீடியா அமேரிக்கானா என்னும் கலைக்களஞ்சியமும் கட்டண அடிப்படையில் இணையத்தில் கிடைக்கிறது. உலகின் மிகச்சிறந்த நூலகங்களில் சேமிக்கப்பட்டுள்ள நூல்களின் தொகுப்புகளை இணையத்தில் தேடிப்பெற முடியும். உலகப் புகழ்பெற்ற அனைத்துப் படைப்பாளிகளின் படைப்புகளும் இணைத்திலுள்ள ஆவணக் காப்பகங்களில் சேமிக்கப்பட்டுள்ளன.இதனைப்பயன்படுத்தி கற்றல் கற்பித்தல் உத்திகளைப் பயன்படுத்திக் கொள்ளலாம்

மேற்பார்வை நூல்கள்

- www.tamilvu.com
- www.tamilnoolagam.com

45. திறன்பேசி கருவிகளில் தமிர் கற்றல் கற்பித்தல் பயன்பாடு

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கருத்து ச்சுருக்கம்

தமிழ் கணிமையின் வளர்ச்சி அனைவரும் பாராட்டும் வகையில் உள்ளது. தமிழ் மொழியில் கற்றல் கற்பித்தல் எளிமையாகவும் ஆர்வத்துடனும் கற்க கையடக்க க்கருவிகள் உதவுகின்றன.தமிழ் எந்த அளவுக்கு வளர்ச்சி அடைந்துள்ளது, மேலும் வளர்வதற்கபன வழிமுறைகள் என்ன என்பதை தெரிந்து கொள்வதும் முக்கியமாகும்.

தமிழ் உள்ளீடு

தொழில் நுட்பக் கருவிகளில் தமிழை உள்ளீடுவது என்பது தான் முதல் முயற்சியாகும். அது தற்போது வெற்றி அடைந்துள்ளது தற்போது மிகவும் புகழ் பெற்று இருக்கும் ரெம்பான்மையான கருவிகளில் உள்ளிட முடியும்.

தமிழ் பயன்பாடு

பெரிய நிறுவனங்கள் க்மிழைக்கட்டாயம் பயன்பாட்டில் வைக்க வேண்டும். தமிழ் பயன்பாடு அதிகம் இருக்கிறது என்ற நிலை இருந்தால் மட்டுமே பெரிய நிறுவனங்கள் தமிழின் பயன்பாட்டை அதிகரிப்பார்கள். எனவே கையடக்க கருவிகளில் தமிழின் பயன்பாட்டை அதிகரிக்க வேண்டும்.அதன்முலம் அவர்கள் பயன்பாட்டில் வைக்கும் எழுத்துக்களின் தரமும் அதிகரிக்கும். தமிழ் அறிந்தவர்களும் கற்றவர்களும் கையடக்கக்கருவிகள், திறன்பேசிகள் ,திறன்கருவிகள், ஆண்டிரோய்டு கருவிகள் ஆகியவற்றில் தமிழைப்பயன்படுத்தும் காலம் விரைவில் வரவேண்டும்.

தற்போது குறுஞ்செய்தி அனுப்புவது மிக இயல்பாகிவிட்டது. மேலும் தமிழ இணையதளங்களை வாசிக்க முடியும். புகழ் பெற்ற எழத்தாளர்களின் நூல்களைத் தரவிறக்கம் செய்யது வாசிக்கமுடியும்.ஒரு செய்தியில் அல்லது நூலில் குறிப்பிட்ட ஒருச்சோல்லையோ அல்லதுஒரு தகவலையோ நொடிப் பொழுதில் தேடிவிடலாம்.அதனை நண்பர்களிடம் உடனடியாக பகிர்ந்துக்கொள்ளலாம். தொடர்பாளர் பெயர்களைத் தமிழிலேயே பதிவுச் செய்யலாம். அழைப்புகள் வரும்போது அழைப்பாளர் பெயர் தமிழிலேயே வெளித்தோன்றும். பாடல்பட்டியல்களை தமிழிலேயே பதிவு செய்துக்கொள்ள முடியும்.

கவிப்பேரரசு வைரமுத்து அவர்கள், நேற்றுவரை முன்றுத்தமிழ், இனறு முதல் நான்குத் தமிழ் இதோ கைப்பேசியில் கணிணித்தமிழ் என்னும் கவிதை வரிகளைக் கொண்டு பாராட்டினார் என்பது பாரட்டத்தக்கது.

தொடக்கத்தில் நோக்கியோ,சோனி எரிக்சன்,சாம்சங் கருவிகளில் மட்டும் இயஙகிய செல்லினம் 2009 ஆண்டு முதல்

ஐ.போனிலும் வெளியிடப்பட்டது. ஐ போனிலும் ஐ பேடிலும் இதுவரை 25,000 பேர் பதிவிறக்கம் செய்துள்ளனர்.

புதிய இலக்கை நோக்கி தமிழ

ஆப்பிள் நிறுவனம் அறிமுகப்படுத்திய புதிய வகை ஐ போன் 5 இல் தமிழ் இடம் பெற்றுள்ளது.தமிழ் மொழிக்கு உலக அரங்கில் மறக்க முடியாத திருப்புமுனையாகும். இதுவரை வெளிவந்துள்ள திறன்பேசியில் தற்போது அறிமுகமாயுள்ள ஆப்பிள் நிறுவனத்தின் ஐ போன் செல்பேசிகளில்தான் விசைத்ட்டுடன் கூடிய தமிழ் இயங்குதளம் அதன்மென் பொருளிலேயே இணைக்கப்பட்டுள்ளது என்பது குறிப்பிடத்தக்கது.இதன மூலம் தமிழ்விசைகளை நேரடியாக பயன்படுத்த முடியும் என்பதும் நவீன தொழில் நுட்பத்தில் தமிழுக்கு ஏற்பட்டுள்ள புரட்கிகரமான முன்னேற்றமாகும்.

முரசு அஞ்சல் விசைத்தட்டு

புதிய ஐ போன் திறன் பேசியில் தமிழ் 99 மற்றும் முரசு அஞ்சல் ஆகிய இருவகை விசைத்தட்டுகளும் இணைக்கப்பட்டுள்ளன. பயனர்கள் இந்த இருவகை விசைத்தட்டுகளில் ஒன்றைத் தேர்கு செய்து,அதில் தாய்மொழி எழுத்துக்களை பதிவு செய்யலாம். ஐ பேட் ஐ போன்கள் என எல்லாக்கருவிகளிலும் இந்த முறையில் நேரடித் தமிழைப் பயன்படுத்தலாம்.

இதுவரை தமிழுக்காக உருவாக்கப்பட்ட சில குறிப்பிட்ட செயலிகளைப் பதிவிற்கம் செய்வதன் மூலமும், ஆல்லது மற்ற திரைப்பக்கங்களில் உள்ள தமிழ்ழெத்துக்களை வெட்டி எடுத்து ஒட்டுவதன் மூலமும் அல்லது ஆங்கில எழுத்துக்களின் மூலமாகவும்தான் செல் பேசிகளிலும்,தட்டைக்கருவிகளிலும், தமிழைப் பயன்படுத்தமுடியும் என்ள நிலைமை இருந்து வந்தது. செல்லினம் என்னும் செயலிதான் இதுவரையிலும் மிகவும் பிரபலமாக இருந்து வருகின்றது.இப்போது ஐ போன்களில் தமிழ் விசைத்தட்டு அதன் உள்ளேயே மென் பொருளுடன் இணைக்கப்பட்டுள்ளதால்,இனி மற்ற நெயலிகளைப் பதிவிறக்கம் செய்துதான் தமிழைப் பயன்படுத்த வேண்டும் என்று அவசியமில்லை

தகவல்களை அனுப்பும் வசதிகள்

நேரடியாகவோ ஐ. போன்களில், ஐ.பேட் போன்ற தட்டைக்கருவிகளிலும் தமிழ்மொழியைப் பயன்படுத்தி குறுஞ்செய்தி அனுப்பலாம். மேலும் முகநூல்,ட்விட்டர், வாட்சப், வைபர் போன்ற இணையத்தளம் செயலிகளில் செய்திகள் தகவல்களை மிக எளிதாக தமிழில் அனுப்பலாம்.இதனால் தமிழைப் படிப்பதற்கும், எழுதுவதற்கும் எளிதாகவும் மகிழ்ச்சியாகவும் இருக்கின்றது.புதிய வகை ஐ போன்களில் தமிழ் அகரமுதலியும் இணைக்கப்பட்டுள்ளது.இதன்வழி தமிழில் பிழையின்றி தட்டச்சு செய்வதற்கு உதவியாக சொற்பட்டியும் தானியங்கிப் பிழைத்தவிர்ப்பியும் இதில் அடங்கியிருப்பது மற்றொரு குறிப்பிடத்தக்க வளர்ச்சியாகும்

முடிவுரை

இனிவரும் காலம் தமிழுக்குப் பொற்காலமாக மாறக்கூடிய வாய்ப்பு ஏற்பட்டுள்ளது.இந்த வாய்ப்பினைப் பயன்படுத்திக்கொண்டு தமிழ் மக்கள் கணினி, திறனபேசி, தட்டை, ஆன்டிரோய்டு தலான திறன் கருவிகளில் தமிழைப் பெருமளவில் பயன்தடுத்த முன்வர வேண்டும்.தமிழுக்கு முன்னுரிமை கொடுக்கும் நிறுவனங்களின் பொருள்களுக்ழும் வற்றாதஆதரவினை வழங்க வேண்டும் தேமதுர தமிழோசை உலகமெலாம் பரவும் வகை செய்தல் வேண்டும் என்னும் பாரதியின் கனவு மெய்ப்படும் காலம் வெகு விரைவில் உருவாகும் என்பதை உணரமுடிகிறது.

மேற்பார்வை நூல்கள

- thirutamil/blogspot .in
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46. கணினி வழி தமிழ் மழலையர்க்கல்வி

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கருத்துச்சுருக்கம்

கணினி மூலம் பாடங்கள் திட்டமிடப்பட்டு இணையத்தின் வழி யாக ஒலி-ஒளி காட்சி கேள்வி முறையில் செயல்படுத்தப்படுகின்றன. இம்முறையில் மழலையர் கல்வியை வழங்குவதில் இணையம் பெரும்பங்காற்றுகிறது. இணையப்பல்கலைக்கழகத்தில் பாடங்கள் சிறப்பாக இடம் பெற்றுள்ளன.இதில் மழலையர் கல்வி இடம் பெறும் பங்கினை இக்கட்டுரை வழி ஆராயலாம்.

மழலையர் பிரிவு பாடங்கள் மற்றும் பயிற்சிகளாக

- பாடல்கள்,
- கதைகள்,
- உரையாடல்,
- வழக்குச் சொற்கள்,
- நிகழ்ச்சிகள்
- எண்கள் அறிமுகம் மறறும்

எழுத்து போன்றன இடம் பெற்றுள்ளன. குழந்வைகளின் ஆர்வத்தைத்தூண்டி சுயமாக படிக்கும் ஆர்வத்தை வளர்க்கின்றன.இப்பிரிவில் பாடங்கள் காட்சிகளாக இடம்பெற்றுள்ளன.

மழலையர் பாடல்கள்

இப்பாடங்கள் இணையத்தில் திட்டமிட்டு வடிவமைக்கப்பட்டுள்ளன,. இவை கவனத்தை ஈர்த்து கண்களுக்கு வருந்தாக அமைகின்றன. நிலா, கைவீசம்மா கை வீசு, காகம், என்பொம்மை, எங்கள் வீட்டுப்பூனை,பம்பரம் போன்ற பாடல்கள் இணையவழி பயிற்சிகளாக வழங்கப்படுகின்றன. நினைவுக்கூறுதல் பயிற்சிகளாக அமைந்துள்ளது. பாடல் வரிக்கான காட்சித்தோன்றும். காடசியைப்பார்த்து பாடல் வரியை நினைவுக்கொள்ள வேண்டும்.

கதைகள்

கதைகளாக சிங்கமும் சுண்டெலியும், குல்லாய்க்காரன், புறாவும் எறும்பும், ஆமையும் முயலும் போன்ற இடம் பெற்றுள்ளன. நிகழ்ச்சியை வைத்துப் படத்தைக்கண்டறிதல் ஆகும்.ஒலியின்

மூலமாகவும் படத்தை இனம் கண்டறியலாம் படக்கதைகள் வரிசைகளாகக் கொடுக்கப்பட்டிருக்கும். காட்சிகளைத் தொடர்புபடுத்தி வரிசை மாறாமல்அமைக்க வேண்டும்.

உரையாடல

கணினி வழி உரையாடல் கொடுக்கப்பட்டிருக்கும். கணினியில் படக்காட்சிகளை அழுத்தும்போது உரையாடலுக்கான காட்சித்தோன்றும்.உரையாடலை எளிமையாகப் புரிந்து கொள்ள வழிக்கிடைக்கிறது.

வழக்குச் சொற்கள்

பறவைகளின ஒலிகள், காய்கள், வடுகள், விலங்குகளின் ஒலிகள்,பழங்கள், கிழமைகள், உறவுப்பெயர்கள், நிறங்கள், வடிவங்கள் மற்றும் சுவைகள் முதலியவற்றை உணர்த்தும் பொருட்கள் கொடுக்கப்பட்டிருக்கும். காய்கறிகளின் பெயரைக்கேட்டு படத்தை கண்டறியலாம். பறவைகளின் ஒலிக்கேட்டு இனங்காணும் பயிற்சி தரப்படுகிறது. வீட்டிற்குரிய விலங்கினத்தின் பெயர்களைக்கேட்டு அடையாளம் கண்டறியலாம்.

நிகழ்ச்சிகள்

இறந்தகால நிகழ்ச்சிகள், நிகழ்கால நிகழ்ச்சிகள், எதிர்கால நிகழ்ச்சிகள் குறித்த செயல்பாடுகள் கொடுக்கப்பட்டிருக்கின்றன. தண்ணீர் ஊற்றினேன்,அப்பா பாராட்டுவார், நான் நன்றாகப்பாடுவேன் போன்ற தொடர்களைக் காதால் கேட்டுப் படத்தினைக் கண்டறிதலாகும்

எண்கள் அறிமுகம்

எண்ணிக்கையின் அடிப்படையில் படங்கள் கொடுக்கப்பட்டிருக்கும். எண்களின் ஒலியைக்கேட்டு சரியான எண்ணிக்கை உள்ள படத்தைச் சுட்டுதல் வேண்டும்.எடுத்துக்காட்டாக மூன்று என்ற ஒலியைக்கேட்டு அதற்கான எண்ணிக்கையைச் சுட்ட வேண்டும்

எழுத்துப் பயிற்சி

படங்கள் மூலம் எழுத்தைக் கண்டறிதலாகும். எடுத்துக்காட்டாக அம்மா, அணில், அருவி போன்ற எழுத்துக்களை வட்டமிட்டுக் காட்டுதலாகும். ஓரெழுத்துப் பயிற்சி ஈரெழுத்துப்பயிற்சி அடையாளம் கண்டறியச் செய்தலாகும்.

முடிவுரை

இதுவரை கூறியவற்றிலிருந்து மழலையர் கல்வியைக் கணினி வழி கற்கும் போது சுயகற்றல் ஏற்படுகிறது. அதுமட்டுமல்லாமல் கற்றலில் ஆர்வமும் விருப்பமும் உண்டாகிறது. திட்டமிட்டுக் கள்பிக்கப்படுவதால் நேரம் உழைப்பு மிச்சப்படுத்தப்படுகிறது.மகிழ்ச்சிகரமான கற்றலுக்கு வழிவகை செய்கிறது.உளவியல் அடிப்படையிலும் மனப்பான்மை மேலோங்குகறது.

மேற்பார்வை நூல்கள்

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47. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

The digital world calls for changed mindsets about schooling, teaching, learning, and assessment. Teachers - who are often more comfortable with broadcast and interactive technologies are now expected to embrace online participatory learning technologies in support of active, passion-based learning by students who live and will work in a digital world. These teachers need support in making major shifts in their practice: how they work with disciplinary knowledge, how they design for learning and assessment, and how they embrace technology. It is time for top-down approaches to schooling to give way to the active, engaged, and collaborative teaching and learning relationships made possible by new educational technologies. This paper highlights the learning and teaching prospects in the digital world.

***Key words**: Digital world, Interactive technologies, Disciplinary knowledge.*

Introduction

Social networking, cloud-based computing, and mobile technologies are transforming how people learn, work, and play. Digital technology has evolved quickly from personal computers and networks to participatory social, academic, and political Web 2.0 environments with a new vocabulary and new temporal and spatial interactions. Web 2.0 applications – Safari, Geocaching, Flickr, Google, Blogger, Garage Band, Wikipedia, YouTube, iMovie, Facebook, Twitter, iPhone, and iPad – are part of a new user-centric information infrastructure that emphasizes creative participation over presentation; encourages focused conversation and short briefs written in less technical, public vernacular; and facilitates innovative explorations, experimentations, and purposeful tinkering that often form the basis of situated understanding that emerges from action not passivity.

This digital world calls for changed mindsets about schooling, teaching, learning, and assessment. Teachers who are often more comfortable with broadcast and interactive technologies – are now expected to embrace online participatory learning technologies in support of active, passion-based learning by students who live and will work in a digital world. These teachers need support in making major shifts in their practice: how they work with disciplinary knowledge, how they design for learning and assessment, and how they embrace technology. It is time for top-down approaches to schooling to give way to the active, engaged, and collaborative teaching and learning relationships made possible by new educational technologies.

In this digital world, engaged teaching matters more than ever. Combining inquiry and technology opens the door to powerful new teaching and assessment practices that result in documented benefits for learners. But how do we provide rich and meaningful professional learning opportunities that

engage teachers in making the shifts that are required of them in blended and open participatory digital classrooms? How do we help them prepare young people to make the most of the technologies at their fingertips?

A Shifting Digital World

The world of work has changed. Technological advances – along with always-available, always-connected personal mobile devices – are enabling corporate communities of practice in which colleagues share experiences, reflections, and insights in a continuous dialogue, unleashed from the four walls of an office or the hours of a standard workday. These 24/7 asynchronous communication capabilities allow corporate knowledge workers to take control of the workday and extend collaborations online in ways that significantly change how 21st century work is conceived, conducted, and completed. "The most powerful thing teachers do to engage students is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences".

Young people are already connected and resourceful; they use personal technology in creative, entertaining, and collaborative ways. But to go beyond facts and procedures, they need engaged and skilled teachers to guide and mentor them towards the deeper conceptual understandings and core competencies that allow them to reason about real-world problems, critically analyze information, and engage successfully in 21st century work.

Teaching and Learning in the Digital Age

The most powerful thing teachers do to engage students is to design engaging, meaningful, and authentic work and technology-enhanced learning experiences. In other words, teaching matters. Research on engagement indicates that teachers have a greater effect on students' learning outcomes than the schools they attend; this holds true at both the elementary and secondary levels. In order to improve learning in a digital world, we need engaged teachers who are supported by professional learning opportunities to continually improve and strengthen their digital competencies and their teaching and assessment practices.

Engaged teachers and engaged students go hand in hand. Research has shown us that engaged teaching practices can enable all students to achieve at high levels and that students have better educational experiences when teachers and students actively collaborate in the process of knowledge building and idea improvement. We know that certain teaching practices and learning processes engage students and teachers in deeper and more sustained learning by connecting them with knowledge and technology in ways that make a difference to themselves and to others.

In 21st century learning spaces, students can become engaged in challenging work that has value beyond the classroom in authentic, inquiry-based tasks that captivate their hearts and minds. The many benefits for both students and teachers of learning in such contexts, using technology in appropriate and innovative ways, have been well documented. Strong discipline-based inquiry work exhibits a number of very discernible characteristics, including academic rigor, authenticity, assessment that is deliberately woven into the work, digital technology that is used in purposeful and authentic ways, connections with experts beyond the school, constructivist approaches to learning, and relevance beyond the classroom. From a longitudinal study at a "1-2-1 laptop" school, student work demonstrating deep understanding of sophisticated concepts emerged from discipline-based inquiry tasks that were intentionally designed with clearly defined criteria in mind.

But students cannot develop deeper conceptual understanding simply from teachers instructing them better. Learning sciences research has demonstrated that only active participation in knowledge construction allows for deeper conceptual understanding of disciplinary concepts and increased motivation for learning. Teachers who engage students in authentic tasks intentionally design active learning opportunities that are similar to the everyday activities of professionals who work in a discipline. By combining these tasks with appropriate technology, students are able to represent their learning in a variety of ways that provide teachers with greater insight into the depth and extent of their understanding.

Reflection on learning is important, both for students and for teachers, and this, too, can be enhanced by appropriate uses of interactive technologies. Students learn better when they express their developing knowledge either through conversation, or by creating written assignments, media artifacts, or visual messages and are provided with opportunities to reflectively analyze their state of knowledge. Research has also demonstrated that the more opportunities teachers have to work collaboratively with colleagues and professional development experts, to engage in professional dialogue about teaching and learning, and to make their work public, the more engaged they become in inquiring into and strengthening their own practices.

"Outside of formal schooling, almost all learning occurs in complex social environments…Teachers who design for peer collaboration and individual reflection on learning cultivate stronger learning outcomes". Worthwhile and academically rigorous work requires students to use their minds well and to demonstrate innovation, problem-solving, and reasoned judgment. Digital learners use multiple media forms and Web 2.0 outlets to share their work beyond the classroom.

Effective Social Learning Online

Outside of formal schooling, almost all learning occurs in complex social environments. When online learners have more control of their learning and participate in active or interactive learning experiences such as collaborative, project-based learning tasks, larger learning gains are observed. Complex social environments and

interactions can clearly be cultivated online. The thoughtful design of meaningful online learning experiences matters; teachers who design for peer collaboration and individual reflection on learning cultivate stronger learning outcomes.

Barbara Means, a leader in evaluating technology-supported educational innovations, led a team of researchers to study evidence-based practices in online learning. A meta-analysis of more than 175 studies found that online learning or blended learning conditions produced stronger learning outcomes than did classes with solely face-to-face instruction. The combination of additional learning time, rich online materials, and additional opportunities for collaboration produced the observed learning advantages. study also showed that teaching and the design of meaningful learning tasks matter more than the particular online technologies used to promote interaction, reflection, and active learning. That said, online learning experiences were more likely to be student-directed, interactive, and collaborative in nature than teacher-directed. The perfect blend appears to involve greater time-on-task for students, with access to rich, interactive curriculum materials – such as online simulations, digital experiments and data collection sites, online reflection tools, and self-assessment strategies.

John Seely Brown and Richard Adler describe the growth and expansion of the Internet as brewing the perfect storm of opportunity for education, providing online access to high-quality tools like scanning electron microscopes and supercomputer simulation models that allow students to engage personally in research and that foster a new culture of sharing in which content is freely contributed and distributed. The evolution of Web 2.0 is blurring the line between producers and consumers of content and shifting attention from access to information to access to other people, and online experiences and virtual communities like Second Life are allowing people with common interests to meet, share ideas, and collaborate in innovative ways.

The greatest educational benefit of online social learning and Web 2.0 technologies is putting students in touch with each other. Social learning is based on the premise that our understanding of content is socially constructed through conversations and through interactions, especially with others, around problems or actions. Collaborative online social learning opportunities increase peer interaction and access to each other's ideas, experiences, and knowledge; it offers more opportunities for students to find and join niche communities where they can benefit from the opportunities for distributed cognitive apprenticeship; and it goes beyond providing access to traditional course materials and educational tools to create a participatory architecture for supporting communities of learners. In the hands of a skilled teacher, these tools can be used to cultivate lively debate and exchange of ideas, support the social construction of knowledge, and democratize the classroom.

Ongoing Professional Learning

Theories of knowledge, learning, teaching, and technology are shifting. Knowledge is more than storage; it is socially constructed and shared. Learning is more than memorization and recall; it is an active, situated, and engaged process of making meaning, interpretation, and developing deep understanding. Teaching is more than information delivery; engaged teaching involves the design and support of rich learning experiences. Technology is more than a tool; it supports deep and engaged learning, simultaneous articulation, creation, and reflection in participatory social networks and dynamic ecosystems. Teachers who have spent an entire career mastering the skills required to manage a 20th century classroom need support to design 21st century social learning approaches in participatory Web 2.0 environments.

High quality, blended professional learning experiences that transform teaching practices do exist. The Galileo Network (www.galileo.org) is a participatory learning ecosystem that engages teachers in scholarly communities of inquiry, along with their teaching colleagues, to transform their practices for a digital world. Working collaboratively, face-to-face, and online with over 2,000 teachers, 200 school administrators, 300 district level professional development providers, and 50 district administrators, Galileo mentors and researchers have been able to create robust research and images of practice for 21st century learning, teaching, and leading. It also provides an online showcase of successful case studies (www.galileo.org/tips/inquiry.html).

Galileo mentors cultivate 21st century practices by working alongside teachers who are dedicated to improving student learning through engaging in professional learning while conducting and applying research. They have developed a set of web-based tools – Intelligence Online (IO) – for creating inquiry projects for students, as well as an open forum where teachers at all levels of experience (and from anywhere in the world) can post their own projects and can participate in ongoing conversations about effective teaching and assessment practices (www.iomembership.com). As members in the Galileo Network, teachers learn how to design and teach in a digital world by using rich online tools and resources; by collaboratively developing rich tasks and student inquiry projects; by actively accessing, evaluating, and developing online educational content and learning experiences; and by participating in online forums within IO to discuss student engagement, the design of great tasks, authentic assessment, and uncovering the curriculum.

Conclusion

Investments in high quality professional learning opportunities to support teachers in designing meaningful, highly engaging, blended learning experiences for students do pay off. Professional dialogue and learning opportunities for a digital world need to be designed and led by professional mentors, teaching colleagues, and school

leaders who model 21st century teaching and learning practices. Teachers matter more than ever, and the education system needs to be held accountable for the teaching that is practiced in the current technology-rich environment. Faculties of education need to provide rich and meaningful ongoing learning opportunities for both pre-service and in-service teachers. Provincial ministries need to resource ongoing and appropriate professional development for teachers and deploy innovative and creative solutions for technological resources and infrastructure. Educational stakeholders must work together, learn together, design and evaluate student understanding and learning together, and leverage each other's best practices to imagine and to create context-specific ideas, practices, and solutions that are flexible and responsive to the diverse learners that each school serves in open participatory learning ecosystem

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48. TECHNOLOGY AND THE KINDERGARTEN CLASSROOM

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Abstract

Technology won't replace teachers, but teachers who use technology will probably replace the teachers who do not" this was a quote I had read a few years ago and wondered. Kindergarten is the place where children are first introduced to semi-formal methods of learning forming groups and develop individual learning styles which are unique. The facilitator becomes the main focus of the class and the little ones begin to emulate the facilitator's mannerisms.

In the past the daily routine would consist of Prayer time, Free play, Tummy time, Language time, Science time and Mathematic time. However, the advent of technology has mesmerized and changed the learning patterns of toddlers and preschoolers. Self Learning tops the Learning pattern. When I began my teaching my children and in the Kindergarten a decade ago, the main fascination were puzzles, colour full books and interactive books. The early 2000 saw the advent of interactive CD rooms and DVDs. Still they were not used as the main teaching aid, the facilitator continued to be the central force for the young learners.

However, the years 2008-2010 saw a steep increase in the tech savvy world using smart-boards, PC's and laptops. The schools too, not to be left behind jumped on to the technology bandwagon especially the kindergarten and the primary level with the aim of increasing learning and becoming a techno school. With the high spurt in Technology development, tablets and smart-phones have now become an integral teaching learning tool. But how has the learning teaching process changed.

Introduction

As the great Educator John Dewey pointed out "***If we teach today's students as we taught yesterday's, we rob them of their tomorrows".*** So the Techno classes with their gadgets simply overtook the classrooms started replacing classrooms where the teacher was the central point in the class, the Technology was able to simplify the learning process and stimulated learning like never before. The burden of creating teaching aids was reduced for the facilitators and certain abstract concepts which could not gain student attention and difficult to be taught were made attractive and easy to understand by the usage of tablets and smart phones. Of course this meant that only relevant apps and age appropriate are to be used.

At our learning center KRISH KIDZEE which caters to toddlers and preschoolers I have come across several learning behaviors which the children have instinctively taken up. Some children enjoyed rhymes and dance, some enjoyed going through the books, some were keen with puzzles and mazes, etc. However, they were dependent on the facilitator for each kind of learning. Children who were not very keen on an activity were found to be distracted in class and disturbed the others or they were not very eager to share books and toys. From the year 2014 when we introduced the Tablets and Talking Pens as part of

the learning process I have observed that children have become more independent in their learning process. The days when the techno based learning were to take place children were more attentive in class and listening ability was much better.

It is a great way to keep the kids busy in situations where they would otherwise be impatient and cranky, and with the carefully selected apps it is possible to convert that play time into a productive and enriching experience. The kids are in fact better at navigating the device and figuring things out than we can ever be. Reading has become more interesting with the use of the talking pen (talking pen is used by making the pen active with the talking pen enabled book and it reads the words touched).

Does Technology benefit a Kindergarten Class?

Technology enhances the oral instruction of the facilitator in kindergarten, preparing students for future challenges. We can say that schools and kindergarten classrooms are no exception. While technology cannot actually take the place of the facilitator and vital developmental play and hands-on learning, it adds to them, reinforcing traditional methods of teaching. Technology for kindergarten class should be so designed that it encourages young children, enhances creativity and is linked to the curriculum wherein it benefits both the Facilitator and the learner.

Increases Motivation

The toddlers and preschool Kindergarten students have very short attention spans, but kids by nature are very inquisitive and curious, this is sparked by technology. When the facilitator involves the students in an activity using the tablet or talking pen to extend their understanding of letter sounds, for example, she gives them the opportunity to interact physically, using keyboards and touch screens. A colorful animated screen captures their attention visually, keeping children interested for longer periods of time. Choosing their own programs for skill practice makes kindergartners feel empowered and encourages them to work independently.

Assessment and Reinforcement

Students have various levels of understanding in each subject and it's not always an easy task for the facilitator to consistently assess each child's strengths and weaknesses. At KRISH KIDZEE our Kindergarten students learn to practice letter, number and reading skills through interactive games (CD's/DVD's/Tablet) as well as the traditional applications using sandpaper cutouts, chalk and board, sand tracing, etc. When we use tablet apps for some of our assessments, we are able to get quick feedback if the child has understood the particular concept or not and thus enables the teacher to reach those children who need one-on-one help.

Encourages Teamwork

In these modern times where nuclear families are the norm, children have lost the aptitude for team work and co-operation. Collaborative learning and social interaction prepare children for the future. When a group of the preschoolers are grouped to listen to a recorded book or works together with the tablet / talking pen to match letters and sounds, they are learning the valuable skill of working together. When four or five students gather around the facilitator around the Lap book and talking pen they join forces in activities such as guessing the correct word before the pen can do it. Two kids sitting together with the tablet to do an activity learn to cooperate and take turns in using the gadget.

Conclusion

In conclusion I would express technology can help both the learner and the facilitator If used wisely. Anything in excess is dangerous. With the right syllabus and age appropriate technology without deviating from the syllabus we can go a long way in creating great classrooms for the early learners

49. FEATURES OF LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract:

The term "digital" has become increasingly popular in recent times. In many cases, it substitutes such terms as "information(al)" and "networked." However, it seems that the term has some performative potential, giving a new perspective of the information revolution, showing its new technical directions and introducing more future-oriented thinking on its effects and impacts. Additionally, the digitization of a growing number of domains of human activities and life is a goal, a process and a set of policies shaping human environment and making it an intelligent ambience.

*Digital World is playing a critical role in how curricula are being developed and implemented. This is reflected in a huge movement in many countries to create **STEM** (science, technology, engineering, and mathematics) curricula to prepare students for lifelong learning and the demands of the future. Others have proposed that this acronym should be expanded to that of **STEAM** {science, technology, engineering, arts and mathematics} if educators*

truly wish to embrace creativity and innovation in all its forms.

Digital world can have a far-reaching effect on how teachers teach and learners learn. The ability to harness these technologies in the design of online classrooms can impact the engagement of teaching and learning by creating more options for learners to connect with course content as well as to other learners.

Features of Digital Worlds

Three enduring processes of digital worlds are interactivity, symbolic flexibility, and vast sources of information. These capacities are especially ripe for expanding imagination, knowledge, thought, and action.

- **Interactivity**

Interactivity of myriad kinds defines the digital world. Direct interaction in the digital world can augment face-to-face interaction. Asking questions and receiving feedback is immediate and fast, for creating seamlessly merged narratives, reports, emails, blogs postings, or social media connections. When tools are not uniformly available, hybrid forms of interactivity can work, as long as there is interactive purpose.

- **Symbolic Flexibility**

Multi-modality images (moving and still), words, and sounds available for flexible use—is another important feature of the digital world. As stated by researchers, "multimodality can afford, not just a new way to make meaning, but a different kind of meaning"

- **Vast Sources of Knowledge and Experience**

Given the constant and increasing amount of information in the digital world, students need to develop skills for accessing it. Students can create databases that can provide a foundation for defining digital databases, their design, issues related to their development, and processes for accessing information archived and live

The New Pedagogy: Students and Teachers as Learning Partners

*"*The fundamental role of a teacher is not to deliver information; it is to guide the social process of learning. The job of a teacher is to inspire, to challenge, to excite their students to want to learn. The most important thing a teacher does is make every student feel like they are important, to make them feel accountable for doing the work of learning".

There is currently a powerful push-pull factor in Education. The push factor is that education is increasingly boring for students and alienating for teachers. The pull factor is that the exploding and alluring digital world is irresistible, but not necessarily productive in its raw form. The push-pull dynamic makes it inevitable that disruptive changes will occur. The developing innovative response for current challenges consists of integrating three components:

1. Deep learning goals 2. New pedagogies 3. Technology.

The Learning solution would have to meet four criteria. They must be:

I Irresistibly engaging for both students and teachers
II Elegantly efficient and easy to access and use
III Technologically ubiquitous 24/7
IV Steeped in real-life problem solving

This new engagement is in pursuit of "Deep learning goals," which we have referred to as the 6cs: "critical thinking and problem solving; communication; collaboration; creative thinking and imagination; character education; and citizenship".

Benefits of Digital Learning: -

Let us first see what digital learning technology is offering right now. Some of the advantages of digital learning at the moments are:

- Easy access and ability to adapt to user's preferences.
- No location or time constraints.
- Multimedia resources and interactive environment.
- Users are part of virtual communities.
- Learning material constantly updated.
- Limited socio-economic status constrains.

What Next Is Coming?

1. The disappearance of computers. Computers used to be the main device for accessing the internet, but tablets and smart gadgets are taking the lead.

2. Cloud-based learning. Cloud-based learning refers to learning online while data are stored in the cloud. Learning resources are virtually available and can be accessed by multiple digital devices.

3. Increased emphasis on digital portfolios. Digital portfolios are online data collections that users can store, edit, and download, and these collections can include various formats as text, multimedia, and links.

4. Gamification. Gamification of learning refers mainly to the application of video game design principles in learning environments.

Future Concerns

1. **The access gap.**
2. **The understanding gap.**
3. **The culture gap.**

Teacher as Facilitator:

Foundations of professional learning culture where teachers see themselves as "coaches and facilitators" of learning must then focus on developing teacher awareness and understanding of the following principles of contemporary learning:

I Connectivism

Connectivism acknowledges the informal networked manner one can learn through the increasing capability of

digital technology. World Wide Web has greatly increased the opportunities for students adopt multiple learning pathways when engaging with the curriculum.

II Networked Learning

Understanding Networked Learning is an essential part of contemporary pedagogy. Connecting through networks in a digital world is when a learner accesses information through a number of connections and uses that information to construct knowledge, often through those same networks. Ex: Twitter, YouTube, Wiki, Pinterest etc.,

III Creativity

Teacher Professional Learning must immerse teachers in an understanding of creativity. Whether it be through the viewing of videos such or increasing creativity through the use of Socratic questioning and inquiry learning, teachers are obligated to understand creative learning, a process which starts with student ideas and imagination which then leads to students 'creating', 'making' and 'designing' for their real world with the possibly of innovation being the end product.

Teacher as Activator:

Teacher be the "change agent or activator," and students be a proactive partner in learning. This shift in students teaching teachers about technology, helping other students as peer tutors and co-learners, and helping themselves through taking on a greater share of learning as a partner is a powerful model. Tech is a tool, it should be an integral part of how the classroom functions, it has the ability to make personalized learning more accessible, as well a myriad of other benefits. But its impact does depend upon a teacher's guidance. To quote

Conclusion:

"Technology will never replace great teachers, but technology in the hands of a great teacher can be transformational." Digital worlds continue to transform in many ways, educational projects must mobilize interactivity, multi-modality, and vast databases of information, which endure along with welcomed changes in portability, flexibility and, for some, accessibility. These digital capacities serve teaching and learning to mediate students' symbolic control, knowledge, and participation in critical and creative thinking about and with others and one's self

50. USES OF TECHNOLOGY IN ENGLISH LANGUAGE TEACHING AND LEARNING

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Abstract

This paper examines the ways in which computers are impacting upon change in ELT and argues that Asian countries are, in a sense, at the heart of this. The paper reviews and further develops a shorter forthcoming colloquium article in The British Journal of Education Technology and begins by linking the growth of English. It briefly examines the ways in which computers have historically contributed to ELT with both pedagogical applications and by helping us understand the nature of the language; however, it is suggested that the Internet, and the resulting computer mediated communication (CMC), has now gone way beyond this to change the language itself. The implications of such change are then discussed from two perspectives. Firstly, for ELT's long established notions of English as a foreign or second language (EFL/ESL); here it is suggested that we need to shift towards a more appropriate view of English as an international or global language (EIL/EGL). Secondly, the paper considers the implications for language teaching pedagogy and argues for a shift away from traditional notions of curriculum and syllabus towards task-based approaches.

Introduction

Due to the number of English learners are increasing different teaching methods have been implemented to test the effectiveness in the teaching process. At present, the onset of technology has drastically changed the old manners of teaching English. With the influence of the phenomenon called Globalization which is interrelated with technology, education work and culture have been affected positively. Nowadays, English language plays a very important role in several fields as education, industries, political, media, library, business and communication around the world. Technology provides a lot of options in order to make English teaching method more interesting, besides this characteristic as well, this modern technological tool helps students to get involved and learn according to their interest. It has been tested effectively and is accepted in teaching English in the modern world. With the spread and development of English around the world, English has been learned and is used by more and more speaker.

Use of Technology in Teaching English

To face the new reality which is related about the increasing of English, new teachers is needed to be instructed to guide students in a successful teaching. ELT gives students too many opportunities to gain confidence and practice, one its characteristics is, that is a new manner of learning and teaching English is more dynamic than the old ones.

The Growth of ELT through Technology

English Language Teaching has been with us for many years and is keeping on growing, fueled, partially by Internet. In 2000 there were about a billion English learners but ten years later the number doubled...On the other hand, over 80 % of the information stored in internet is in English. At present there are more Non-Native than Native who uses the English language. In this contest, we can see the application of Multimedia Technology in teaching, featuring audio, visual, animation effects come into full play in English class teaching and sets a favorable platform for reform and exploration on English teaching model at the present. It is important for language teachers to be aware of the latest and best equipment and to have full knowledge of what is available in many given situations.

Teachers can use Multimedia Technology to give more colorful stimulating lectures. There are many techniques which are applicable in different degree to language learning situation. Some are useful for testing and distance education, and some for teaching business English, spoken English, reading, listening or interpreting. Never let the machine takeover, the role of the teacher plays or limit function where more traditional ways are superior.

Analysis on Necessity of Application of Multimedia Technology to English Teaching

1. To Cultivate Students' Interest in Study

Nowadays, multimedia technology is more acceptable because it offers a various resources as visual animation effects naturally and humanly makes us more access to information besides, multimedia technology offers a sense of reality and function very well, which greatly cultivates students' interest.

2. To Improve Teaching Effect

Multimedia teaching enrich teaching content improve class efficiency. The utilization of multi-media sound lab materializes the individualized and co-operative teaching. Multimedia technology goes beyond time and space, create more vivid, visual, authentic environment for English learning stimulates students' initiatives and economizes class time meanwhile increases class information.

3 To Improve Interaction between Teacher and Student

Multimedia teaching stresses the student's role, and enhances the importance of "interaction" between teacher and students. A major feature of multimedia is to train and improve students' ability to listen and speak and to develop their communicative competence. During this process, the teacher's role as a facilitator is particularly prominent.

4. Creates a Context for Language teaching

This method makes the class lively and interesting, optimizes the organization of the class, sounds and picture can be set together.

When using multimedia software, teacher can use picture and imagines to enrich the content of classes, this allow students to understand the class in a clear way. Through multimedia and network technology we can offer students not only rich, sources of authentic material, but also an attractive and friendly interface, vivid pictures and pleasant sounds.

Conclusion

Multimedia is a modern and useful tool which makes the teaching and learning time in classroom more dynamic but it should not replace the important role the teacher plays as a guide. The human factor allows students to interact from the very beginning during the process of learning language. We have to be aware that we cannot throw away some extra resources like the blackboard where many explanations can be given to let students gain a solid knowledge of the language they are learning. A good teaching happens when students have the opportunity to think on their own way in the process of learning and this is possible by the actions of the teacher who should use the modern technology but in the right way.

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51. SPLICE PARENTS AND TEACHERS VIA DIGITAL IN SCHOOL

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Abstract

This idea is about the parents teachers association in digital form. For that we can use the blog to convey the administrative details and class works by the teachers and principal and skype is for face to face interaction between the parents and teachers. Thus we titled the theme as "SPLICE PARENTS AND TEACHERS VIA DIGITAL IN SCHOOL". The process can be done by the parents even in home or in working place. Other than this the functions, events, fees details, fund and collections can be verified by the parents in blogs. **keywords:** Bind, PTA, digital.

Introduction

If we want to convey a message, we used to meet or we can send a letter, this was the traditional method whereas, after the inventions and the use of digital the hierarchy begins with landline, computer, mobile, internet, tab, tablet etc. Now, the use of technology we can send the message and even we can check whether they had seen or not. Digital India was started 25 years ago by the former prime minister Rajiv Gandhi there was some political problem later in 2015 Prime minister Narendra Modi restarted this plan and implemented digital India were on process. By this why can't we use these facilities in education which will be useful for future cubs.

Education in digital world

"Education for a digital world contains a comprehensive collection of proven strategies and tools for effective online teaching, based on the principals of learning as a social process. It offers practical, contemporary guidance to support e-learning decision-making, instructional choices as well as program and course planning, and development. Practical advice, real-life examples, case studies, and useful resources supply in-depth perspectives about structuring and fostering socially engaging learning in an online environment. Education for a digital world is an indispensable guide, resource, textbook and manual for policymakers and practitioners in developing and developed countries."

Parent - Teachers association(PTA)

Most schools have a Parent Teacher Association (PTA), which is an organization of parents and staff. Its role is to encourage closer links between home and school. PTAs are best known for their fundraising work, but they have a useful social function too. Fundraising events provide an opportunity for parents, staff and pupils to get together. The role of the parent is set down in the education act 1998 as follows:

"A Parents association shall promote the interests of the students in a school in co-operation with the board, principal, teachers and students."

PTA VIA DIGITAL

Blog created for the conversation between teacher and parents:

- For example, each class/grade blog is created as shown: 1classmkschool.blogspot.in, 2classmkschool.blogspot.in and so on.
- Purpose of these blogs is to communicate the common information for a class like homework, test, fees, competitions, etc., to the parents.
- Blog ID is given earlier to the parents so that they can easily to know about the information given by the teacher.
- Parents can also reply their views in blog.

Video conferencing (skype)

Face to face interaction between parents and teacher can be done through skype. There is no any completion for the parents to travel instead, they can communicate wherever they are- through mobile, computer/laptop.

Blog created for the conversation between principal and parents:

- To convey the problems regarding fees, students, etc., to the parents.
- Also the parents can communicate about the problems and issues based on the facilities, transports, management issues, staff, students, etc., to the principal directly.

FUNCTIONS:

I. World aids day:

Traditional format:

Usually the institutions will have prepared the invention paper attach them in the student's school dairy. By this the parents know about the events.

Digital format:

Invitation is created and sent in blog. So that the parents can know about the details easy as shown:

II. Flag day:

Taditional format:

In this method teacher used to write in a diary of each student about the flag day amount collected for the flag day, and its due date.

Digital format:

- In this format we can collect the amount along with the academic fees through the digital transaction. E.g.: the student- XX account number- 56XXXXXXXX
- Here if we collect the amount before for the safety measures and use it for each program and functions.
- In case the student discontinues or got TC— institution will return the rest of the amount through transaction. If not, it is used for the next academic year.

III. Fees and funds:

Traditional format:

Usually parents used to bring the currency and pay the fees. At the last moment parents will wait in queue and pay the fee.

Digital format:

Parents can transfer the amount via net banking. This makes the stress free payment for them.

Advantages:

- There will be personal contact between the parents and the institutions.
- PTA is conducted in rotation in which the parents may fails to attend due to some personal reasons. But, if we use digital format parents can choose the dates as well as he/she can check the details in blog.
- Fees details can be registered and followed by the parents easily.
- Though the parents where in abroad can get the information about their child easily.
- When compared to the traditional format, digital format will be much faster and easier.

Conclusion:

Digital PTA was founded on the idea of reducing printed paper waste as well as waste human hours entering data multiple times. When you switch to a digital PTA plan for your school's PTA, you are saving paper, energy, and time.

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52. LEARNING AND TEACHING IN DIGITAL WORLD.

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Abstract

Educational technology as the theory and practice of educational approaches to learning. Educational technology as technological tools and media that assists in the communication of knowledge, and its development and exchange. Educational technology for learning management systems {LMS} such as tools for students and curriculum management, and education management information systems {EMIS}.

Keyword: Technology, Practice, Learning, Educational, Knowledge

Introduction

Educational technology is defined by the association for education communicational and technology as "the study and ethical practice of facilitating learning and improving performance by creating using and managing appropriate technological processes and resources"

Educational technology refers to use of both physical hardware and educational theoretic. It encompasses several domain including learning theory, computer –based training, online learning and where mobile technologies are used m-learning.

Definition

Richey defined educational technology as "the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological process and resources. The Association for Educational Communication and Technology [AECT] denoted instructional technology.

History

Helping people learn in ways that are easier, faster, surer or less expensive can be traced back to the emergence of very early tool such as painting on cave wall. Various type of abacus has been used. From the early 20th century duplicating machine such as mimeograph and Gestetner stencil devices were used. The concept hypertext is traced to the description of Memex by Vannevar bush in 1945.

Theory

Varies pedagogical perspectives or learning theories may be considering in designing and interacting with educational technology. E-learning theory examines these approaches. These theoretical perspectives are grouped into three main theoretical schools or philosophical frameworks: behaviorism, cognitivism and constructivism.

Flipped Classroom

This is an instructional strategy in which computer – assisted teaching is integrated with classroom instruction. students are given basic essential instruction before class. this frees up classroom time for teachers to more actively engage with learner.

Audio and Video

Radio offers a synchronous educational vehicle while streaming audio over the internet with webcasts and podcasts can be asynchronous. Classroom microphones, often wireless can enable learners and educators to interact more clearly. Digital video via server or web-based option such as streamed video from you tube, teacher tube, skype, adobe connect, and webcams.

Screen Casting

Screen casting allows users to share their screen directly from their browser and make the video available online so that other viewer can stream the video directly. In combination with audio and video, the educator can mimic the one-on-one experience of classroom.

53. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract

The purpose of this presentation is identify implications for future investment in the use of digital technology for learning & teaching in schools, Digital technology are now embedded in our society. It helps to deal with the quality of information in research which can overwhelm other approaches.

Learning and teaching in a digital world

We will develop our helps skills and understand in the field of E-Learning and digital documentalism**.** Most teachers encourage online research including the use of digital technologies such as cell phones to find information quickly. Yet point to barriers in the school environment impeding quality online research. "Technology is only us good us we understand the evidence behind it and Prepare ourselves to use effectively".

Instructors can also boost students:

Motivation and time management skills by urging them to treat online courses. Four basic requirements for learning.

1. A Person needs clearly understood reasons why the knowledge is necessary and valuable.
2. People need the time to acquire new knowledge and information.
3. People need essay access to valuable knowledge and information.
4. People need a way accurately measure their performance.

Classroom management

Classroom management is closely linked to issues of motivation, discipline and respect. Methodologies remain a matter of passionate debate amongst teachers; approaches vary depending on the beliefs a teacher holds regarding educational psychology. A large part of traditional classroom management involves behavior modification, although many teachers see using behavioral approaches alone as overly simplistic. Many teachers establish rules and procedures at the beginning of the school year. According to Gootman (2008), rules give students concrete direction to ensure that our expectation becomes a reality.

They also try to be consistent in enforcing these rules and procedures. Many would also argue for positive consequences when rules are followed, and consequences when rules are broken.

Pinterest

Pinterest is a contemporary digital version of creating a collage or scrapbook. It was launched in 2010 and reached 10 million unique visits quicker than Facebook and Twitter (Constine, 2012). Images can be collected, grouped by common theme and displayed to others via an online inboard. Users are encouraged to interact by sharing images 'repining' through the use of browser add-ons, and can comment and 'like' pins.

Knowledge-based economy

The term “knowledge-based economy” has been widely used, but seldom defined, in numerous reports and studies since the mid-1990s. An early definition of knowledge based economy put forward by the Organization for Economic Development (OECD) was “an economy in which the production, use, and distribution of knowledge and information are critical to the process of economic growth.” (OECD, 1996) A more recent definition of knowledge-based economy presented in a joint study by the World Bank and the OECD (2002) is “an economy in which knowledge is created, acquired, transmitted and used effectively by organizations, enterprises, individuals and communities.”

TALIS

The Teaching and Learning International Survey (TALIS) is an international study of teachers, teaching, and learning environments. TALIS's objective is to provide internationally comparable indicators on teachers and teaching to help countries review current conditions and develop informed education policy.

Educomp's smartclass

Educomp's smartclass is a technology oriented initiative for schools. It provides tools and content for interactive self-paced learning by students, as well as rich-media presentations for teacher-led classroom learning.

Smart class is for teachers and students over the web, and will also be installed on the school's local server for faster and more reliable access to the content.

The content available consists of pedagogically sound and visually rich curriculum resources mapped and customized as per the school's Scheme of Work. This content will be streamed into the classroom and shown by teachers in the classroom to make abstract concepts real.

Project-based learning

Project-based learning (PBL) is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems.[1] Students learn about a subject by working for an extended period of time to investigate and respond to a complex question, challenge, or problem. It is a style of active learning and inquiry-based learning. PBL contrasts with paper-based, rote memorization, or teacher-led instruction that simply presents established facts or portrays a smooth path to knowledge by instead posing questions, problems or scenarios.

Internet

Most traditional communications media, including telephony, radio, television, paper mail and newspapers are being reshaped or redefined by the Internet, giving birth to new services such as email, Internet telephony, Internet television music, digital newspapers, and websites. Newspaper, book, and other print publishing are adapting to website technology, or are reshaped into blogging, web feeds and online news aggregators. The entertainment industry was initially the fastest growing segment on the Internet. The Internet has enabled and accelerated new forms of personal interactions through instant messaging, Internet forums, and social networking. Online shopping has grown exponentially both for major retailers and small businesses and entrepreneurs, as it enables firms to extend their "bricks and mortar" presence to serve a larger market or even sell goods and services entirely online. Business-to-business and financial services on the Internet affect supply chains across entire industries.

Conclusion:

Taking to the future the digital environment is transforming teaching and learning in our school we are committed to taking full advantages of the opportunity to help our schools become world leaders in digital educational systems thought changes to their, infrastructure, practice and pedagogy.

54. THE IMPACT OF TECHNOLOGY ON EDUCATION

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Abstract

This chapter provides a brief history of technology in education, outlines the benefits of using emerging technologies in e-learning, provides design guidelines for developing learning materials, describes the support required for these technologies, and discusses future trends in e-learning.

Introduction

Learners. Educators, and workers in all sectors are increasingly using **emerging technologies** such as cell phones, tablet PC, personal digital assistants (PDAs), web pads, and palmtop computers. As a result, these tools make learning and **training** materials accessible anywhere, anytime.

Today, the trend is towards learning and working "on the go", rather than having to be at a specific location at a specific time. As learners become more mobile, they are demanding access to learning materials wherever they are and whenever they need them. This trend will increase because of **ubiquitous computing,** where computing devices, wireless connectivity, and transparent user interfaces are everywhere.

Educators must be prepared to design and deliver instruction using these emerging technologies. In addition to delivering learning materials, emerging technologies can be used to interact with learners, especially those who live in remote locations. At the same time, learners can use the technologies to connect with each other to collaborate on projects and to debate and discuss ideas.

This chapter provides a brief history of technology in education, outlines the benefits of using emerging technologies in e-learning, provides design guidelines for developing learning materials, describes the support required

for these technologies, and discusses future trends in e-learning.

The history of instructional technology in education

In the early ages, before formal schools, family members educated younger members with one-to-one coaching and **mentoring.** Early instructional technologies were sticks to draw on the ground and rocks to draw on walls.

Information was not recorded permanently. With the invention of paper and the printing press, information was recorded, and learners could refer to documents as

needed for learning. The paper revolution was followed much later by the invention of computer hardware and the software that makes computers do what we want, including developing electronic learning materials.

In the early 1960s, these learning materials were designed and developed on mainframe computers. In the 1970s, **computer-based** training systems used minicomputers to teach. With the invention of the microcomputer in the late 1970s and early 1980s educators and learners had more control over the design and delivery of learning materials. As learners determined for themselves what they wanted to learn, the instructor's role changed from that of a presenter of information to that of a facilitator. The microcomputer revolutionized the way educational materials were developed and delivered. The instructor was able to design learning materials using authoring systems, and learners were able to learn when and where they wanted.

Rumble (2003) identified four generations of distance education systems: correspondence systems; educational broadcasting systems; **multimedia** distance education systems; and online distance education systems. In early distance education learning materials were mailed to learners and the learners mailed assignments back to the instructor. The first attempt to use computers for instruction was by the military, who designed instruction to train military staff. About the same time, educational institutions started to use broadcast television to deliver instruction to learners. With the invention of the microcomputer in the 1970s, there was a shift to microcomputer- based learning systems. Because the different microcomputer systems then in use did not communicate with each other, there was limited flexibility in developing and sharing learning materials. Also, the early microcomputer systems did not provide features such as audio, video, and special effects. As instructional technology improved, educators developed learning materials in less time and with more control over the product.

Until the late 1970s, educational institutions used face-to-face classroom instruction. This was followed by a shift to a more individualized format using self-study workbooks, videotapes, and computer software. As technology advanced, the group-based classroom mode shifted to the one-to-one mode of delivery. The combination of the Internet and mobile technology has moved

e-learning to the next generation, allowing educators to design and deliver learning materials for learners living in remote locations, or who cannot attend face-to-face schools for other reasons. The available computing power of these technologies allows educators to better meet the needs of individual learners.

Benefits of using emerging technologies in e-learning

Because of the rapid development of information technology, there is a shift from print-based learning to e-learning to **mobile learning** (m-learning). M-learning refers to the use of electronic learning materials with built-in learning strategies for delivery on **mobile computing devices** (Ally, 2004). Mobile devices offer many benefits. Thanks to wireless technology, mobile devices do not have to be physically connected to networks to access information. They are small enough to be portable, allowing users to take the devices anywhere. Users can interact with each other to share information and expertise, complete a task, or work collaboratively on a project.

Benefits of emerging technologies for education:

- Education is scalable, since educational institutions do not have to build classrooms and infrastructure to hold face-to-face classes. To accommodate more learners, educational institutions need only expand the network and hire more instructors to facilitate additional courses.
- Electronic learning materials are easy to update. Because learners use their mobile devices to access the learning materials from a central server, they can receive these updates as soon as they are made.
- The same learning materials can be accessed by students from different regions and countries.
- Learners can complete their education from any location as long as they have access to the learning materials, possibly through a wireless connection.
- Because learners can access the learning materials anytime, they can select the time they learn best to complete their coursework. This increases the success rate in learning, and facilitates informal learning.
- Designers of learning materials for emerging technologies can leverage the computing power of the technology to personalize the learning experience for individual learners.
- Since learning with emerging technologies is learner focused, learners will be more involved with their learning, and thus motivated to achieve higher level learning.
- For businesses, mobile learning can be integrated into everyday work processes, which promotes immediate

application. The emerging technologies allow workers to access learning materials for **just-in-time** training.

- Because most learners already have mobile technology, educational institutions can design and deliver courses for different types of mobile technology (Ally & Lin, 2005).

Mobile technologies such as Blackberries, Treos, iPods, and cell phones are being used in the classroom and in distance education to reach out to students and to deliver learning materials to students. Instructors are taping their lectures and making them available for students to listen whenever they like. Providing lectures and learning materials in audio format is important for some subject areas such as when learning a language and English Literature. The mobile technologies are also used to connect to students to inform them when course requirements are due and informing them on updates to courses. Mobile learning technologies can be used in any discipline that can be broken down into small segments of instruction. This will allow students to complete one segment at a time. In addition to playing a support role in classroom instruction, mobile technologies can play a major role in distance education by delivering instruction anywhere and at any time. Books and course information will have to be formatted for reading on computer and mobile devices screens. A good example of how this is being realized is the screen on the one-hundred-dollar laptop (OLPC, 2006). Information on the screen can be read in daylight as well in the dark. The small screens on the mobile devices are becoming more advanced for reading. As with the development of the virtual screen, students will be able to project information and images on a surface that is the same size as a regular computer screen. However, before these benefits can be realized, the learning materials must be designed specifically for emerging technologies.

Design principles for developing learning materials for emerging technologies

In developing learning materials for any technology, learning theories must be used for effective and efficient instruction. This section will address theories and design principles for emerging technologies.

Early learning materials development was influenced by **behaviourist learning theory**. Behaviourists claim that it is the observable behaviour of the learner that indicates whether or not they have learned, not what is going on in the learner's head. Early instructional methods, such as the teaching machine, were influenced by behaviourist theory. The teaching machine taught by drill and practice, and transferred the repetitiveness of teaching from the instructors to the machine.

Cognitive learning theory influenced the development of learning materials with the introduction of computer-based instruction. Cognitive psychologists see learning as a process involving the use of memory, motivation, and thinking, and that **reflection** plays an important part in learning. Cognitivists perceive learning as an internal process and claim that the amount learned depends on the processing capacity of the learner, the amount of effort expended during the learning process, the quality of the processing, and the learner's existing knowledge structure. Cognitive theory was influenced by information processing theory, which proposes that learners use different types of memory during learning.

As technology emerged, there was more emphasis on learner-centred education, which promoted the use of **constructivist theory** in the development of learning materials. Constructivists claimed that learners interpret information and the world according to their personal reality, and that they learn by observation, processing, and interpretation, and then personalize the information into their own worldview. Also, learners learn best when they can contextualize what they learn for immediate application and to acquire personal meaning. The learner-centred approach allows learners to develop problem-solving skills and learn by doing rather than by being told.

They are many **instructional design** models for developing learning materials. Dick et al. (2001) proposed a design model with the major components being design, development, implementation, and evaluation of instruction. Another widely used model is by Gagne et al. (1991) who claimed that strategies for **learning** should be based on learning outcomes. Gagne specifies nine types of instructional events:

- gain the learner's attention;
- inform the learner of the lesson objectives;
- stimulate recall of prior knowledge;
- provide informative feedback;
- assess performance; and
- enhance retention and learning transfer.

Most of the current and past instructional design models were developed for classroom and print-based instruction rather than for learner-centred instruction and e-learning. New instructional design models are needed to develop learning materials for delivery on emerging technologies.

According to Jacobs and Dempsey (2002), some emerging influences that will affect future instructional design include object-oriented distributed learning environments, the use of **artificial intelligence** techniques, cognitive science, and neuroscience. Below are guidelines for educators to develop learning materials for delivery via emerging technologies.

Planning for implementing emerging technologies in e-learning

Good planning and management are necessary for developing and delivering successful learning materials. E-

learning development projects tend to be interdisciplinary, requiring a team effort. No one person has the expertise to complete the development project. The different types of expertise required include subject matter, technical support, instructional design, project management, multimedia, and editing. Educational organizations should be thinking long-term and strategically to make sure that learning systems are aligned with the goals of the institution.

Conclusion

E-learning materials must be modular to allow for flexibility in delivery. Modular learning materials allow learners to complete a module of instruction at a time rather than an entire course. The learning time for a module of instruction is between two to four hours. The content must be broken down into small chunks and developed as learning objects. The modular format allows the segments of instruction to be tagged and placed in learning object repositories for easy retrieval by learners and instructors. When designing learning materials for emerging technologies, educators must think globally and must design for the future so that the materials do not become obsolete. Learning systems of the future must develop intelligent systems to relieve tutors from routine decision-making so that they can spend time on issues concerning the learning process. Intelligent systems will be able to design, develop, and deliver instruction to meet learners' needs. For example, an intelligent agent will be able to identify learners who need extra help and provide an alternative learning strategy. The intelligent agent should anticipate learners' requirements and respond immediately to take corrective action or to present the next learning intervention based on learner's characteristics and style to maximize learning benefits. In other words, the intelligent agent holds form dynamic profiles of the learner and guide the learner to the next step in the learning process.

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55. LEARNING & TEACHING IN THE DIGITAL WORLD

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Introduction:

A 7th standard student says, he is not interested in Math & English, you know why? His or her reasons: - 1. Teacher is not pretty. 2.It's ok if she is not pretty but she doesn't even dress well. 3.They do not like her voice.

Teacher's Appearance

Today's student's requirements are very different. If we don't make ourselves clear, we can't handle them. We have to clear in certain aspects of our profession. We have to be very sharp & innovative.

We teachers should always be 'on' mode. For (e.g.:-) Innovative, alert (All the time on). We should always be thinking about what we should do next. We should be innovative in our teaching methods.

Innovative & Initiative

To do innovative things we have to be initiatively smart & talented. Education is not only about answering questions.

Why did we keep aside students who are answering questions & take on our hands students who ask questions?

Why? Why Not? These 2 questions are most welcomed by students. We have to teach students to be very fast. We have to teach them about world cinema, teach them to talk strongly & bravely. When a boy was questioned what will he do when a job he didn't get goes to another person what will he do? First boy said I will think about it sir, is this my goal, I will be a little upset & tense. Second boy answered, it is a loss for that company sir for not having me (This is attitude).

In an advertisement about a foot cream a girl is wearing slippers with heels & walking she was very radiant

& beautiful as a doll everybody thought she is going to win, suddenly one of her slipper, heel breaks off & everyone became silent, her eyes got a little wet after a few seconds she claps for herself she throws away the other slipper. She walks in barefoot with the same charm.

She wins 1st prize. This is attitude what this say is she did not expect another person to lift her up & she did not sit in fear of embarrassment from others; she cheers for herself, this is attitude.

Sachin who hit 2 centuries is known as god of cricket, the day he hit is 2nd century was the 2nd day after his father passed away. He did not spread his father's ashes he attended his father's funeral & come back to south Africa, for next match, after hitting his 200 he takes of his helmet & looks up the sky slightly tears in his eyes. In this moment he pays respect to his father. (This is attitude.)

Even though his father's ashes were in his home he chased his target that is attitude.

Alice in Wonderland

- Alice is a small girl
- Red Queen is the anti-heroine
- White Queen is the heroine.

In this movie when the small girl is taking to the white queen a voice is heard saying "Alice run". She started running & white Queen also run with her. Alice asks a question where are we going? When you said to run, I started to run I'm not going anywhere. Then she asks why are we running?

The queen answers the land which are we are standing is always moving backwards even if we want to stand in a place we stood before we have to run head over heels.

If we have to stand in a place where we already stood what we should do to win. There are 3 types of students

1. Intelligent
2. Talented

In a class is there are 30 students, 2 will be intelligent, 5 will be talented & about the rest 23 are going to be administrators, who are going to manage these intelligent & talented students, they will be the silent ones in class, they will be having no idea s what they would become.

Intelligent & talented people earn well Administrators will pay others well. To recognize these students & bold them to become the people who pay well is a big privilege. How to stand up with self-respect is many students don't know to talk in English. Why they don't know is because, of our system, if asked why they say they can't. It's alright if they don't know they should not say they cannot.

For e.g.: I don't know how to drive a lorry, it's not that you cannot drive you should learn how to drive. To learn we have to stand up for ourselves. For a chance to learn students have to boost their confidence level & lift their confidence even more.

Confidence is very important

There is also another word for the confidence in how we are also other words

1st word we saw 1) Attitude.

2nd word we saw 2) Learning.

Discipline

If we become teachers, we automatically don't become disciplined. Discipline means how we conduct ourselves continuously. What is your discipline? My discipline is a Teacher. So, Learning is a discipline. "Disciple" is a student. "Discipline" is Learning.

If a person observes about what he is learning, he is a person who is born to win. There should be some impact in learning. Learning is not what is thought in classroom, learning is something different. For (e.g.): There was a person called SOCRATES, he was killed by consuming poison. Before drinking poison, he was walking continuously, when someone asked why he was walking. He said after drinking poison he has to walk, so he was practicing for that.

Can anyone talk like that? When he was walking he heard music from the opposite side. Immediately Socrates shouts is anybody there, friend anybody? I am Socrates, I know the song instrument you're playing, what is that instrument? The other person answered it is a mouth organ.

Socrates said "O" Mouth organ ha…, I have that in my house, but I don't know how to play it, he asked can you teach me how to play? He answered you are going to die in two hours, why you wish to learn it now? What did Socrates answer? What did he ask? When I am about to die the "thought" that I know how to play mouth organ is it not enough? Why is this thought not enough this made the official door with long walls to think.

"If we think about it one thing is true". "If we keep on learning We can lead life with honesty We don't hesitate to work Mind is always sharp Awareness".

Now a day, students are very "resourceful". They are not able to express it because they don't believe in themselves, they don't know how to communicate, this is a fault why? BECAUSE,

A person who is used to watching fast moving scenes cannot read allow or talk slow. There are many channels, many scenes, but no "Imagination". "Imagination is more than knowledge" said Einstein. Students as well as Teachers Should have self-determination.

56. LEARNING AND TEACHING IN THE DIGITAL WORLD

Mrs. S. VANITHA, Assistant Professor, CK College of Education, Cuddalore.

Abstract

Digital learning technologies can enable students to grasp concepts more quickly and fully, to connect theory and application more adeptly, and to engage in learning more readily, while also improving instructional techniques, leveraging instructor time, and facilitating the widespread sharing of knowledge. Digital technologies will enable this in new and better ways and create possibilities beyond the limits of our current imagination.

Introduction

"To raise new questions, new possibilities, to regard old problems from a new angle, requires imagination marks real advance in science". – Albert Einstein

Digital learning refers to learning that's assisted by computers, laptops, tablets and smartphones. Over the last 10 years, their contribution to education has grown significantly. How, where and when children learn today is very different from what you experienced at school.

Educators the world over have researched, developed, evaluated and shared countless ways to improve learning through the use of digital technologies. School programmes now include education on how to behave well and be safe in this virtual world, just as we have always done for the 'real' world. There is strong agreement on the benefits of digital learning for students.

Technology

Technology is the mechanism that delivers content. It facilitates how students receive content. It includes Internet access and hardware, which can be any Internet access device – from a desktop to a laptop to an iPad to a smartphone. Technology is the tool, not the instruction.

Digital Content

Digital content is the high quality academic material which is delivered through technology. It is *what* students learn. It ranges from new engaging, interactive and adaptive software to classic literature to video lectures to games. It isn't simply a PDF of text or a PowerPoint presentation.

Instruction

Educators are essential to digital learning. Technology may change the role of the teacher but it will never eliminate the need for a teacher. With digital learning, teachers will be able to provide the personalized guidance and assistance to ensure students learn and stay on track – throughout the year and year after year – to graduate from high school. Teachers may be the guide on the side, not the sage on the stage. To that end, these are their identified principles for innovative learning.

1. **Learners have to be at the center of what happens in the classroom** with activities focused on their cognition and growth. They have to actively engage in learning in order to become self-regulated learners who are able to control their emotions and motivations during the study process, set goals, and monitor their own learning process.
2. **Learning is a social practice and can't happen alone**. "By our nature we are social beings and we learn by interacting," Groff said. "We learn by pushing and pulling on concepts with one another." Structured, collaborative group work can be good for all learners; it pushes people in different ways.
3. **Emotions are an integral part of learning**. Students understand ideas better when there's interplay between emotions, motivation and cognition, so positive beliefs about oneself are a core part of reaching a more profound understanding. The power of emotions and motivation in the classroom are well documented, but often overlooked because they are "soft." Still most teachers know that if a student is upset about something that happened at home or in school, he won't learn well. Similarly, keeping students motivated should be the starting point of learning. If students understand why it matters, learning becomes more important to them.
4. **Learners are different** and innovative learning environments reflect the various experiences and prior knowledge that each student brings to class. "You really want practices and processes that help teachers engage each student where they are," said Groff. This principle is understood by every frustrated educator teaching to a "middle" that doesn't exist.
5. **Students need to be stretched, but not too much.** "It's really critical to find that student's sweet spot," Groff Said. Educators should try to prevent both coasting and overloading. Students need to experience both academic success and the challenge of discovery. In a diverse classroom group work can help achieve this as students at different levels help one another.
6. **Assessment should be for learning, not of learning**. Assessments are important, but only to gauge how to structure the next lesson for maximum effectiveness. It should be meaningful, substantial, and shape the learning environment itself. "Good teachers do this informally most of the time," Groff said. "But when it's done well and more formally it's a whole structure and methodology where you collect feedback on the learning pathway and it drives the next step that you take."
7. **Learning needs to be connected across disciplines** and reach out into the real world. Learning can't be meaningful if students don't understand why the knowledge will be useful to them, how it can be applied in life. Understanding the connections between subjects

and ideas is essential for the ability to transfer skills and adapt. “We can’t just have things remain in silos that never interact,” Groff said.

Digital learning technologies help students

- **Learn more efficiently:** Digital assessments offer students rapid feedback on their understanding, allowing both students and instructors (who can access this information) to concentrate their efforts on where further understanding is most needed. Adaptive hinting, which provides guidance to incorrect responses, corrects misperceptions immediately and helps students to figure out problems real-time.
- **Learn more** fully: Rapid assessment, simulations, visualizations, games, annotation technology, and videos with multiple instructors provide a richer learning environment toward a fuller understanding of concepts. Annotation technologies, discussion boards, and online support provide additional forums for discussion, debate, conjecture, and edification.
- **Learn with mastery**: The ability to pace learning to one’s preference, to review material, and to be assessed on a section before moving to another leads to mastery learning.
- **Learn the best way:** Active engagement, hands-on experiences, discussions and flipped classrooms allow students to experience learning that applies best practices and directly employs current theories of learning.
- **Learn anytime, anywhere**: Asynchronous classrooms allow students to “go to school” where and when they are most ready to learn. This helps graduate students access advanced information needed for their thesis research when they need it. It gives flexibility to undergraduates to study abroad or pursue an internship. And, it allows lifelong learners to continue to pursue an education, while meeting work and family commitments. Digital learning makes education more accessible and affordable to students on campus and also worldwide.

Digital learning technologies help instructors:

- **Leverage time better:** Digital learning provides quick feedback to instructors on where students are struggling, allowing teachers to provide additional instruction and answers to common questions, either online or in person. Automation eases or eliminates routine grading, freeing course teams to spend more face-to-face time with students.
- **Spread knowledge widely:** Digital platforms allow instructors to reach more students, often by orders of magnitude than via on-campus courses. Instructors can disseminate new ideas more quickly, touching more people and impacting more lives.
- **Engage a worldwide audience:** Digital platforms allow instructors to meld worldwide participants into campus teaching, creating global conversations – resulting in richer teaching experiences, from architecture and entrepreneurship, to climate change and innovation, and beyond.
- **Build learning modules quickly:** Digital learning empowers instructors to build courses using the best content previously developed by other instructors and colleagues, whether within the same department, or even at other institutions. This “digital abstraction” for modular learning content is the real meaning behind the “digital” of digital learning.
- **Improve instructional techniques:** Through evidence-based research, instructors can measure how people learn most effectively and respond with scientifically grounded strategies for educating students.

Personalized and engaging

Digital technologies enable new levels of personalized learning. Students can progress at the right pace and along the right path for their needs at any point in time. Feedback on work completed can be immediate, with programmed hints leading students to master a skill or concept before moving on to the next. Teachers are free to address more challenging concepts one-on-one at the point where each student is ready and wanting to learn about them. Not only does this approach promote competency, it also keeps students more motivated and engaged.

Collaborating across borders

Students can now collaborate with other students, educators and experts like never before. They’re no longer limited to who’s in the room. Up to date information and continuously improving learning opportunities are available to all. Students can learn about other countries, cultures and perspectives first hand by easily connecting with people around the world. A collaborative project can be assigned to a group of students based in multiple schools or countries. There are even online forums where students can post questions and receive free responses from people with specialist expertise.

Publishing to the world

One of the great benefits of digital technologies is how they help students to publish their work. Not just helping to make it look good, but actually putting their work in front of real people, from a chosen audience or around the globe. This significantly increases motivation and depth of learning. Online feedback rewards and extends the learning. It’s like having your work reviewed by hundreds of helpful teachers, not just one.

Parents can do it too

For parents, the ability to participate in your child's education is increased as more of it extends beyond the classroom and into your home. There are also plenty of opportunities to grow your own knowledge and skills through digital technologies, creating a continuous learning environment in your household.

We design and develop creative, interactive digital learning solutions that can be accessed from desktops, laptops, tablets, and smartphones. We apply our deep understanding of instructional design and visual and user experience design to analyze learning requirements and transform all forms of content into powerful digital learning experiences.

We offer end-to-end digital learning solution with a tightly coupled client engagement through all the stages of the development process, right from ideation, to designing, developing, and implementing the solution.

Our design approaches include creative blend of instructional strategies such as scenarios, stories, and games, all of which come together to form memorable learning experiences.

Future Possibilities

We are excited about the implications of digital learning. Early results show benefits to students and to faculty, and students really like the immediate feedback that digital learning enables.

We can envision and are actively developing further improvements to digital learning technologies: richer assessments, more nuanced feedback, customized pathways, increased modularity, more sophisticated simulations, enhanced peer interaction, and many other possibilities. Still more exciting are those advances that we have yet to imagine, and that will revolutionize teaching and learning.

Conclusion

The tradition of providing for a limited degree of access to published materials that was established in the world of physical artifacts must be continued in the digital context. But the mechanisms for achieving this access and the definition of "limited degree" will need to evolve in response to the attributes of digital intellectual property and the information infrastructure. The confluence of three developments—the changing nature of publication in the digital world, the increasing use of licensing rather than sale, and the use of technical protection services—creates unprecedented opportunities for individuals to access information in improved and novel ways, but also could have a negative impact on public access to information. Developments over time should be monitored closely.

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57. LEARNING AND TEACHING IN THE DIGITAL WORLD

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Abstract:

It's increasingly apparent that education is moving and will move, to some extent, online. We can't predict to what degree, but we can say with certainty that we cannot ignore the fact that some of what is now done in the classroom or as homework in a "self-study" format, will happen online. Personally, I still believe that the face-to-face classroom is still the most effective place for learning and teaching, but this will be supplemented by something that takes place online. Learning will change in the future – flipped classrooms, blended learning, language learning apps and so on. In addition, there is a growing body of literature helping teachers to make better use of this online environment to work with students and to get the most out of it. In short, online teaching and learning is now being written about and researched at great length, and this existing work provides valuable support for the educational community that is practicing teaching and learning online.

Education in the digital world

"It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change." The words of Charles Darwin are definitely relevant to the world of digital education. Colleges and other institutes imparting higher education are thrown in the middle of radical and pervasive change where education is being driven by technology and innovations. Needless to say, institutes must respond to that change in such a way that helps to shape the future of Indian higher education or else be in a precarious condition of fading into obsolescence. So, following the tide, the higher education system in India gradually went on to embrace this digitized form of education, involving both – teaching and learning.

It started with the management colleges in India, especially the top tier institutes like the Indian Institutes of Management. From providing computer labs to fully computerized libraries, the institutes gradually took to practices like beaming; laptops became a common feature in classrooms of top institutes where business management courses were being offered. Written tests taken earlier by students on pen and paper have been replaced by computerized tests. Power point presentations are often accepted as projects submitted by students. If we are to analyze the current trends in the form of higher education, we have to understand that times change and one has to be responsive and adaptive towards these changes – thus, it will ensure survival in the long-term. Today, with technology taking a leap ahead with smartphones and tablets not only making an appearance but also becoming a hit favorite especially among the younger generations, education has again started redefining itself. Experts are of the opinion that India has witnessed a surge in start-ups in the domain on education, in the last two/three years owing to the popularity of tablets and smartphones.

With the passage of time, the digital spaces have opened up an entire new gamut for education in India. Professional education and online education is on the rise. As life becomes faster and we face a crunch for time, we have easily resorted to the online world. Professionals are looking for an easy way to pursue higher studies and at the same time ensuring that they can secure a job. Following the new wave, educational institutions have also offered a way out – online education programs. As of now all we can say is that, the Indian education system is undergoing a gradual transformation because of digital media.

Learning and teaching in the digital world

A recent UK-India business Council report titled Meeting India's Educational Challenges Through E-Learning states that India is the second biggest e-learning market globally after the US. The country's education sector is undergoing a revolution, thanks to rapid internet penetration and the availability of low-cost mobile and hand-held devices. With technology playing a major role in multiplying reach and providing access to learning tools and material, this opportunity is being seen as a huge potential for many foreign and domestic training providers offering online education opportunities in the country. "Yet efforts are still fragmented and many of the more advanced innovations in online education technology remain the remit of private enterprises. In an effort to bring rural India in to the digital age, the Centre has launched the Digital India campaign. Some of this campaign's targets include providing broadband connectivity to a quarter of a million rural villages by 2019 and making Wi-Fi connections available in schools," says the report. "Digital education today is no longer limited to the four walls of a classroom. It has paved way for virtual classrooms, making learning attainable and providing easy access everywhere and every time. This has allowed students to use digital learning as a 'flipped classroom' adding considerable value to the manner in which education is imparted. The latest trends in digital education space also include adaptive and collaborative learning where a student is engaged by practicing, experiencing, sharing things and gaining knowledge in a collaborative environment. The fourth generation of communication technology is speculated to revolutionize the digital education space by providing cutting-edge user experience."

"A talk-and-chalk classroom is being replaced by interactive whiteboard with projector and speakers, which is student centric that breeds immersive learning environment. Reports show that a number of institutions are taking steps to adopt the digital approach to learning. The changed perspective is evident from the fact that all good schools have now switched to Smart Learn Classes as per the current trend. They are no longer rigid in their teaching methodologies. To support e-learning, students require easy availability of mobile devices like tablets and smartphones, to make the flipped class a reality. We need to spread more awareness amongst the teaching fraternity, students and most importantly parents about the marvels of the digital education space.

For digital learning to make an impact till the last mile there has to be a larger vision of integrating technology into our complex education system. To achieve this, it is imperative that we put our stakes on digital infrastructure, ready access, quality e-content and affordability. Learning should be made interactive and fun for the learners to exponentially enhance retention and application. The government's focus is to integrate technology in digital learning for both urban and rural India. It is also looking at public-private-partnerships to enhance reach to rural and remote areas. To have a positive impact on learning and solve the big educational problems in India, technology is not the only solution that we are looking at. There is need to have a bigger vision of enabling technology to help students learn better and teachers teach better. Therefore, solutions to hurdles like affordability, accessibility, mode of delivery and content are indispensable.

Technology has made it possible to implement digital classrooms. "Through technology, efficiencies and transparency can be brought into schools by helping stakeholders such as students, teachers, parents and administrators streamline routine tasks, improve assessments and learner/teacher data collection. However, the greatest advantage of using technology in classrooms remains the uniformity of the educational process which ensures that the same quality of education is delivered in all domains and regions, and also improves the efficiency of the teachers' manifolds." Experts also believe that for inputs to be translated into learning, it is important that the learning is interactive besides being digital. "The digital education space is at a nascent stage in India. The industry is fragmented and there is no player currently who is offering a suite of courses to cater to the varied needs of learners. Since, e-learning is at

a buoyant stage, live interactivity that empowers high engagement and social collaborative learning has rendered the conventional format of e-learning led by recorded lectures and course slightly inadequate. Digital learning as a format can work better across levels, courses and streams than conventional format."

Conclusion:

"India has seen a dream of Digital India. From latest science to latest technology, everything should be available at the tip of one's finger". "Digital India 's is not an elite concept anymore. We have to use this idea to revolutionise health and Education in India".

58. EDUCATION AND TECHNOLOGY - DEVELOPING A GLOBAL PERSPECTIVE.

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Abstract:

This paper, about educational technology is association for educations and technology, learning theory, computer based training. Educational theory as the theory and practice of educational approaches. Technology in education is less about the toolset and skillset and more about the mindset. The teacher's most prominent role in the digital age is that of lead learner. Benefits of technology in the classroom national PBS survey, promotes individuals learning, supports differentials instructs technology cab help schools put education in plans of study across the globe. ***Key points****: Alarming Rate, Busuu app, braining camp, crippling and gamification*

Introduction:

Educational technology is defined by the Association for Educational Communications and Technology as "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources".

Educational technology refers to the use of both physical hardware and educational theoretic. It encompasses several domains, including learning theory, computer-based training, online learning, and, where mobile technologies are used, m-learning. Accordingly, there are several discrete aspects to describing the intellectual and technical development of educational technology:

- educational technology as the theory and practice of educational approaches to learning
- educational technology as technological tools and media that assist in the communication of knowledge, and its development and exchange
- educational technology for learning management systems (LMS), such as tools for student and curriculum management, and education management information systems (EMIS)
- educational technology itself as an educational subject; such courses may be called "Computer Studies" or "Information and communications technology (ICT)".

Technology in the 21st Century Classroom

"Technology in education is less about the toolset and skillset and more about the mindset. The teacher's most prominent role in the digital age is that of lead learner."

Technology has become an integral part of our life and learning patterns in the 21st century. The internet, blogs and smart phones are some examples of tools that we use to grow in our knowledge and understanding. Using technology like this in the classroom requires more than knowing how to use the tool. Teachers need to understand the role of technology in the learning process, and the principles behind integrating it in a way that it promotes learning without it being a distraction.

This course teaches concepts and ideas behind using technology in the classroom. It also helps teachers to understand the various skills that students need to develop in order to use technology in the most effective way. It equips teachers to help students use technology intelligently and responsibly.

The Importance of Technology in the Classroom

Technology in the classroom used to involve playing *Oregon Trail* on one of the four available PC's in the "computer lab." The 21st Century has made great strides since then, and children today have unprecedented technology tools at their disposal.

Despite the positive trends towards adopting technology in the classroom, the full menu of technology is still not universally available to all students. Many schools struggle with nearly-crippling budget cuts and teacher shortages, and some have had to make difficult choices.

Using technology at school has become an important talking point across all campuses from K-12, an on through higher education. This article will explore the importance of technology in the classroom.

Benefits of Technology in the Classroom

If students, parents, and even teachers are convinced of the importance of technology in the classroom, what obstacles are standing in the way of implementing them?

The National PBS Survey found that 63% of educators say that the cost of technology is too high to successfully implement technology in the classroom. However, there are still cost-effective solutions that can help educators get the technology they need and deserve in their classroom.

- Instructors Can Personalize the Education Experience
- Instant Access to Knowledge
- Student Preference
- Student Workplace Readiness
- Trend toward Blended Learning Environment
- Teacher Support
- Proven Student Engagement
- Tools are improving at an Alarming Rate
- Website Creation and Access are Cost-Effective
- The Teaching Industry is Ready for Emerging Technology

Online education:

Technology can help schools put education in palms of students across the globe. Rather than the old system of attending physical class, schools can embark on technology and open up their boundaries. This help them reach more students across the globe and improve on learning abilities of those students. The private sector has played on big role in embracing this technology by inventing educational mobile apps which allow students access library a content via phones, so also schools can adopt the same culture to reach more students.

- E-learning
- E-tutoring
- M-learning
- Blended learning
- Linear learning
- Asynchronous learning
- Synchronous learning

The importance of using technology in the classroom

There are many benefits of using technology in the classroom, especially as students become increasingly digitally literate. The shift in worldwide computer usage and the need for computer skills in today's workforce have pushed the United States government to create guidelines, such as the Core Curriculum Content Standards, for educators to ensure that students are prepared to meet the demands of the 21st century.

Technology use is particularly important in STEM fields. STEM is an acronym for science, technology, engineering, and mathematics. The term is typically used in education policy with a focus on improving the United States' competitiveness in technology development. Technology use in STEM has implications for workforce development, national security concerns, and immigration policy. Because of this, maintaining a citizenry that is well versed in the STEM fields is therefore a key element of the United States' public-education agenda.

Ways to incorporate technology in the classroom

This increasing focus on technology use in schools and the shifts in ways that modern-day learners communicate have impacted how computers are used in the classroom. Currently, teachers utilize various Web 2.0 tools to enhance their instruction. Such tools are also being used to extend classroom communication outside of campus.

Centered primarily on collaboration and sharing, Web 2.0 computer applications encourage student self-expression, interaction with peers, and opportunity for authentic learning experiences (see). Through the implementation and integration of Web 2.0 computer technologies in the classroom setting, students are now able to have new authentic and meaningful learning experiences. For example, modern-day education is not focused on simply learning concepts or facts as they are laid out in a curriculum. Instead, it is about the process of building connections. As a result, students gain an awareness of the importance and the value of communication. Today, with a single laptop, a webcam, a projector, and an Internet connection, a teacher can broadcast and begin collaboration with any other classroom. As groups of learners coalesce around shared passions online, they experience something that is difficult to replicate in physical space.

Conclusion:

Learning through computers and the internet combines learning about them with learning with them. It involves learning the technological skills 'JUST-IN-TIME' or when the learner needs to learn them as he or she engages in a curriculum related activity. Educational technology as technological tools and media that assist in the communication of knowledge and its development and exchange

I think one of the exciting aspects of 21st century technology in education is its use for designing creativity. It's about finding ways to use technology meaningfully, so the investment is made by schools is a worthwhile one, and it makes education more relevant to life and by making the learning more dynamic.

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59. EDUCATION FOR A DIGITAL WORLD

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Introduction

At the present era, the advancement in information and telecommunication is rapid. Due to this tremendous development that has taken place in various fields, the world has shrunk into a small village. As a result of this advancement of technologies in education, everyone is able to gather information, study courses, run businesses from their own places itself.

Internet

Internet is the instant encyclopedia in the present situation. Internet is a large network of computers as that of LAN and WAN. Internet is the acronym of the term, International Network. Thus, the system of interconnected computers is represented by the term Internet.

Telematics

For example, the telecommunication networks which include telephone, fax unit's satellites, switching devise, computer networks and all the integrative procedures that enable these technical facilities to be used are collectively called as telematics. With the help of telemetric and satellite, the activities of education can be improved and enhanced by introducing many innovations.

Teacher and Technology

Educational technology is defined as "the application of scientific knowledge and learning and the conditions of learning to improve the effectiveness and efficiency of teaching and training." In order to make the teaching process more effective and training." In order to make the teaching process more effective and purposeful, number of teaching aids are employed in the teaching activities the teacher. These aids are now replaced by advanced technological devices. Educational technology has provided hardware to the classroom teachers. Respective software materials are also prepared on the psychological basis.

Conclusion

As a result of educational technology, the situation of 'students learn from the teachers' is changed into 'students learn through the teachers by various technological devices and methods.

60. DIGITAL LEARNING - SOME THOUGHTS

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Introduction

Information is being considered as basic ingredient for the society, ICT has, however, rejuvenated a new dimension to information i.e. as commodity. Connection of networks, further, strengthen to a fast communication with a real time feeling among people across the world. The academic libraries are moving into a critical take off phase. They are in between modernization and transformation phase and would be progressing as largely digital in next few years. However, development in academic libraries and recent technological advancements has emerged a kind of divide or gap between information seekers and the environment. It divided society into two worlds of information seekers: born digital; and born in the world struggling for survival in the digital world. Therefore, all possible efforts need to be made to fill up or close this gap in the society for making sustainable world in the digital environment. Information literacy programmes can be a trustworthy technique in order to reduce this gap in the present academic environment.

Users of Internet

E-learning describes the cognitive science principles of effective multimedia learning using electronic educational technology. 3.77 billion global internet users in 2017, equaling 50% penetration; 2.80 billion global social media users in 2017, equaling 37% penetration; 4.92 billion global mobile users in 2017, equaling 66% penetration; 2.56 billion global mobile social media users in 2017, equaling 34% penetration; 1.61 billion global e-commerce users in 2017 and equaling 22% penetration.

Changes Between 2015-2016:

- Internet users grew by 10% in 2016, up 354 million compared to 2015
- Active social media users increased by 21%, up 482 million versus 2015
- Unique mobile users grew by 5%, up 222 million over the past 12 months
- Mobile social media users grew by 30%, up an impressive 581 million in 2016.

Digital Library Environment

ICT has brought notable transformation in many factors, particularly in the area of disseminating information speedily. As earlier people were reluctant to make use of power of ICT, however, today apparently seen a complete change in peoples' mindset in the society.

Moreover, the present generation of students is more comfortable with ICT in their everyday life. Now, most of the students rely on technology to collect information and to communicate with others.

On the other hand, in this age of information overload; the availability of more than 17 million internet sites, three billion web pages, and more than a million items in typical medium-sized academic library and more importantly, unorganized information available on Internet. So it is critical to get desired information easily from internet and it affects academic success and personal learning.

Digital Divide

IT has made an intense impact on the society and also influenced on lives of people immensely. The unequal access to ICT has led the society, India in particular, to a massive divide digitally; digitally rich & digitally poor, like:

- Communities those haves access to computers and the internet and those have-nots;
- Similarly, no uniformity for accessing information through effective use of ICT in the academic environment.

Appropriate Step

Bridging this gap in the country through digital and information literacy programmes for the learner's community would be an apt solution.

Reasons for Digital Divide

Internet is used by only 35% of the world's population and that some 85% of all uses and 90% of all hosts are in developed countries. Internet penetration in India is only 10% of total population.

Information Literacy

Not only the ICT literacy is responsible for this fragmentation in the society in the present digital environment, but, all types of literacy are responsible, including- media literacy, computer literacy, visual literacy, tool literacy, resource literacy, social-structure literacy, research literacy, publishing literacy, critical literacy and emerging technology.

Information Literacy Education

In the ICTs environment, modern methods have been emerging in the class room teaching and learning. So the instructional and learning needs of learners has changed noticeably.

There is a need to prepare students in different ways like- making them comfortable with technology and digital environment, and working with different people and ideas collaboratively.

In the ICTs environment, modern methods have been emerging in the class room teaching and learning, so the instructional and learning needs of learners has changed noticeably.

There is a need to prepare students in different ways like- making them comfortable with technology and digital environment, and working with different people and ideas collaboratively.

Role of Library Professionals

The library and information centers have a distinctive role to play in the present democratic society in order to reduce the gap between those who haves and those who have-nots through information literacy and other programmes, particularly in digital environment.

Librarian, now being more proactive information provider, should think of designing digital resources guides on various subjects, which include- search strategies for locating e-resources, and preparing a list of useful reference materials, high-quality websites, and so on.

Role of Learners

Most of the time, students are in trouble in understanding the materials available in digital form, however, they cannot use it in a right context, so they just copy the contents. Therefore, in the present environment, students should have to be academically skilled, methodologically competent, a team worker, creative and information literate.

So, the students can discuss the need of relevant material, how to move forward in this process, about frustrations in writing the projects and information seeking and the related problems like teaching, consulting, research, and so on. They should also collaborate in the design, application, and maintenance of information access systems.

Evaluation

Evaluation is a holistic approach; all the phases of learning must be seen because all of them contribute to the total development of the child. Evaluation therefore must judge the strength of the content selected, the strategies employed, and the instrumental materials used

Conclusion

It is dangerously destabilizing to have half the world on the cutting edge of technology while the other half struggles on the bare edge of survival

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1. E-PORTFOLIOS: A UNIQUE MODEL FOR ASSESSING LEARNING

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Abstract

Digital Portfolio can be said as an organized, goal driven collection of documentation that presents a student's growth and achievement over time in a digitalized format. This paper intends to explain how e-portfolios have become a tool for effective assessment. It also discussed how rubrics are developed for learners to follow for making portfolios in on-line and off-line mode. Rubrics put certain criteria for students to make the portfolios. It adds how e-portfolio assessment has aided the evaluators and even the students. With the help of e-portfolio how they are able to reflect to understand their strengths and weakness and capable of monitoring their learning for filling out the gaps.

Introduction

The necessary part of teachers' work is to measure students learning. It is essential on the part of the teacher to know by what means students are learning. Therefore, to understand the learner's status of learning e-portfolios can be one of the important instruments to evaluate and assess students work. Digital portfolios will help to bring out the strengths and weakness of the students during assessment. Monitoring students' progress in learning has become the key element in any teaching and learning approach. Thus, portfolio assessment is the form of 'alternative assessment' in this digital age. This assessment can be helpful with the development of rubrics which creates certain standards for the learner to make the portfolio on the basis of those principles which makes even for the evaluator to give scores to the student's achievement in learning.

Assessment

There has been a growing interest in the present scenario to assess student's achievement and their learning outcomes with the help of E-portfolio prepared by the students. The vital process of education is assessment. Assessment can be defined as systematic collection of information about learning of the students which further helps in the improvement of learning. Marchese (1987) said, "Assessment is the systematic collection, review, and the use of information about educational programs undertaken for the purpose of improving student learning and development". Assessment can be both summative and formative (OECD, 2008). E-Portfolio is "a digitalized collection of artefacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution" (Lorenzo & Ittelson, 2005). It can be a digital repository for a range of learning materials, including those produced for course-based assessment. E- Portfolios are planned and compiled by the owner (students) rather than by the educator. E- Portfolios can provide ways for students to use feedback from assessment to support their learning. The ability to collect, reflect and connect aligns with assessment-as-learning principles.

Assessment of e-portfolios can be done in various ways:

- Tracking and identifying skills, knowledge and evidence gaps that require further work
- Storing the evidence and documenting in a single folder helps to assess the portfolios easily and reduces the loss or damage of the portfolios
- E-portfolio once saved can be networked from any computer and people don't need to carry anything
- E-portfolios will help sharing and collaborating documents with other systems
- Scalability (the capacity to deal efficiently with higher volumes of evidence and learners)

Assessment is a way of understanding student's attainment of knowledge, understanding and skills. Assessment is an on-going process aimed at improving student's learning which further supports to review and reflect on their presentation.

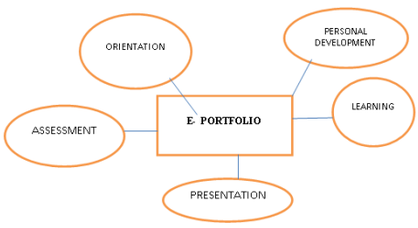
Assessment can be of two types. It can be assessment of learning and assessment for learning. Assessment of learning is the assessment that results in statements at the end of any course or unit about how students learned and what they have achieved. Assessment for learning is moreover like a formative assessment which happens during the course of learning where students are given feedback and advice on how and what to improve in their learning. Hence, in assessment for learning teacher uses assessment as an investigable tool to find out as much as they can about what the students know and what confusions, preconceptions and gaps they have which assist the evaluator to collect information about student's status of learning and how can they do it in a better way.

E- Portfolio

The portfolio was very first used in the year 1980 in schools with the aim of evaluating the learners work (Belan off, Elbow & Fontaine, 1991, cited by Barett, 2007). In 1994, the portfolios appeared in the approaches of learning with its strong potential (Herman and Winters,1994 cited by Barnett, 2007). Portfolios can be used in many contexts. The below figure shows the contexts where E-portfolio can be used:

Though it can be used for various purposes, in this paper the use of e-portfolio for assessment has been discussed. In the present era, it has been found e-portfolio to be the important tool for assessment and hence it is termed as

"alternative assessment". This tool allows the evaluator to track the progress of the students in a better manner and help the learners to reflect on their learning. It helps the learners to understand their progress and also enable them to share their work online with other students and peers.



The E-portfolio helps to monitor their learning and allows various ways to have progress in their education. E-Portfolios allows learner to have control of their learning and also promote to have deeper learning. In the present scenario Portfolio assessment has become more common in schools as it helps the faculty to assess student development over periods of time, sometimes across several years. Maher & Geber (2009) stated "E-portfolios are a part of personal online spaces such as digital learning platforms which store a range of data types, including text, audio and video evidence which demonstrates what students know and have done overtime. Portfolios can be helpful for learners at all ages and can be used for documentation such as:

(i) **Products:** actual work samples, learning and opportunities
(ii) **Process:** student's reflections of their learning, outlines, drafts, strategies used; and
(iii) **Perceptions of learning**: attitudes, motivations, self-assessments and goal setting.

Paulson et al. (1991) describes portfolio as a meaningful collection of student work that demonstrates progress or mastery guided by certain standards and includes evidence of student self-reflection". Electronic portfolios provide a unique way to document the progress of the students and encourages them to improve by motivating them (Buzzetto-More, 2006).

Danielson and Abrutyn (1997) laid a process for developing digital portfolio:

1. **Collection:** The purpose of the portfolios will help the person to determine the future use of artefacts and what should be the collection for developing the portfolio.
2. **Selection:** Maintaining a portfolio always has some learning objectives which will help to reflect on the learning objectives to select materials. While selecting artefacts the learner should be aware of the rubrics or performance indicators.
3. **Reflection:** The documentation of the artefacts will help the students or learners to reflect now and then on the work they are proceeding with to recognize their strengths and gaps which will help them in improving.
4. **Projection**: Portfolios helps in reviewing the reflections on learning, look ahead and set goals for the future work.

Grant (2007) defined, "Digital portfolios as repository of artefacts, a means for presenting oneself and skills, qualities and achievements and a tool for sharing and collaborating. Chang (2001) mentions, "Digital portfolio is the transformation of all products reflecting the development of an individual into soft copies that can be read in digital format. The technology in the present age has brought convenient way for every individual to prepare portfolios in the digital environment and the person requires technology knowledge and skills to make an e-portfolio.

Portfolio for Digital Assessment

There are various means to assess the learners in which E-Portfolio is one of them which may be new but has been used for many years in universities as a tool for online assessment. In academic environment there are various types of portfolios such as developmental portfolio (documents about improvement in subject area over a year in school, college, universities), college admission portfolio (a student portfolio, usually a showcase portfolio, used to determine eligibility for admission to college, university).

Portfolio assessment focuses on the growth and development over time, implemented through selection, reflection and inspection of class work, along with goal setting and evaluation (Fogarty, 1998) Portfolio assessment make students aware of their learning progress. Digital assessment helps the students to assess their progress and performance in a richer format. It acts a kind of software that serves an interactive teaching or assessment tool. The assessment of student's work is done with the use of technology rather than the traditional pen-paper method. Digital assessment can benefit the students in many ways. It helps the students to get assessed any time when they are ready and even residing far which makes students to be responsible for their own learning and can be lifelong. It encourages collaborative work and can be easily reviewed by the students and evaluator anytime at any place.

Therefore, in digital portfolio students are exposed to online working environment where they can make their artefacts and resources in various media formats. It allows students to collect and record artefacts in a digitalized form. Digital assessment is the presentation of evidence for judging the achievement of the student managed through the medium of computer technology. It helps students to show-case their digital work and reflects on the process of learning. It can be both in online and off-line form. Digital portfolios are well form of assessment. Assessing e-portfolios help students to have affective and cognitive development. The assessment can be done only after the development of the rubrics.

Rubrics

A rubric is a coherent set of criteria for student's work that includes descriptions of levels of performance

quality on the criteria. 'Rubric' is a tool in scoring qualitative student work that includes both dimensions of performance and standards for achieving stated criteria. (Johnson & Svingby,2007). Chang et al. (2012) recommended the use of assessment rubrics to ensure the reliability of e-portfolios.

Rubric is a new form of assessment and so for the learners it is a new method. The learners should be given appropriate training and also should be made aware of the goals and reasons for implementing e-portfolio. Students should be made aware of the evaluation criteria. Therefore, the main purpose of rubrics is to assess one's performance. The types of performance can be assessed with the help of rubrics can be physical, oral communication, writing and work habits. Rubrics can be analytic or holistic. In analytic rubric each criterion is evaluated separately whereas in holistic rubric all dimensions or criteria are evaluated simultaneously.

Reckase (2002) designed a rubric which includes:

i) The extent to which the learner has grasped the subject matter.
ii) Portfolio contents
iii) Reflective thinking
iv) The content richness and difficulty
v) Organization and presentation

A rubric is a tool for assessment. It can be used to evaluate a range of student performance across several different categories or criteria. A rubric defines the specific attributes in the 'Rubristar' which helps to score or judge the performance of the students which further helps to differentiate among the learner's level of performance. Developing Rubrics is time taking because it needs to follow certain standards such as:

1. Identify the criteria or categories of performance
2. Determine how many levels of performance will be characterized
3. Describe clearly the different levels of performance for each category

Conclusion

E-portfolios are still in the evolving stage in the educational system. It functions as a tool for faculty to monitor and evaluate the effectiveness of any work done. Thus, for examining the student's achievement E-portfolios can be one of the best tools to assess what students gained or learned over the time period. It helps in assessing students learning and thus motivates them to generate new or deeper learning by reflecting on the prior learning the learner already possesses. Therefore, it results in the personal development of the learners.

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2. DIGITAL EVALUATION: TOWARDS FASTER AND BETTER RESULTS

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Abstract:

This paper is aimed towards realizing the shift from paper-based evaluation forms to digital evaluation; which is paperless. Digital evaluation brings sustainable development in the long run by virtue of being environment-friendly in the first place. Secondly, computer-based evaluation reduces manual labour and burden of correcting and scoring papers on the part of teachers, enabling them to devote themselves more into the fundamental processes of teaching-learning and research. Thirdly, digital evaluation would enable manifolds faster result publication in the Indian context where students often miss out on precious academic sessions due to late declaration of results. The digital evaluation system would enable a better centralized practice in evaluation making it easier for students to jump across institutions which, now follow a great deal of subjectivity in terms of evaluation, leaving the students in a helpless state after completion of a degree. Fourthly, the Indian Education system has often been criticized for adoption of partiality and bias in its marking system; differing across institutions and regions; as evaluation rested solely in the hands of educators. This element of bias can be

effectively reduced when evaluation is digitized. Finally, when the world is moving towards a system of digital evaluation, India should not hold back. This paper therefore advocates the relative merits of digital evaluation, also focusing on the Continuous and Comprehensive Evaluation (CCE) paradigm, for faster, smoother, transparent and a better experience of educational evaluation for all the stake-holders involved- students, teachers and the community at large.

Introduction:

Examination, as an infallible instrument of evaluation has been influential judgmental devices, setter of benchmarks, learners' goal, society's criteria for employment and a necessary evil. Evaluation has always been an integral part, and a culminating judgment of learning in India. The system of evaluation underwent gradual changes over the ages. The last few decades have witnessed a splurge of educational reforms due to the effects of massive digitization. The Digital Age has enforced all aspects of life to succumb towards e-governance and e-communication systems.

The Government of India under the leadership of Prime Minister Narendra Modi, has championed the cause of a digitized e-governance and for the acquisition of 21st century digital knowledge and skills through the "Digital India" movement launched in 2015. Simultaneously, examination, which plays a vital role in education, has undergone systematic reforms. The Mudaliar Commission or the Secondary Education Commission Secondary Education Commission Report (1952-53) was the first post-independence policy to introduce the importance of internal assessment data in school leaving certificate and the use of symbolic grading instead of marking.

This commission's recommendations widely advocated a Continuous and Comprehensive Evaluation (CCE) paradigm and school-based assessment to reduce the stress and burden of an externally evaluated single final examination which, was often blamed for being a partial and ineffective judgment of students' educational growth and development.

According to Ten Brink, evaluation is a process of collecting information and using it to form judgments, which in turn are used for making decisions (Singh, 2011). Measurement is a pre-requisite for evaluation and is limited to 'how much of a thing' whereas evaluation is a meta-concept which suggests what the value of that measurement is:

Evaluation = Measurement + Value Judgement.
(Gronlund, 1981)

For centuries on end, evaluation consisted of pen and paper achievement tests which were evaluated manually by instructors. The basic or fundamental glory underpinning a shift from traditional paper forms of tests to a digital version, rests in the viability of a paperless and therefore, ecologically beneficial version of evaluation. The cost of paper production is enormous as compared to an economical digitized testing system. Additionally, to preserve bulky paper-tests as records becomes a hassle for the institutions over the years that end up periodically selling these as mere debris. Digital testing enables to record and archive test results for unlimited duration as concepts like cloud storage have revolutionized the capacity of archiving and accessing of documents and files in any form. Hence, a digital evaluation will contribute towards sustainable development in the long run as an environment-friendly initiative towards saving paper and therefore saving trees.

Teachers have always been traditionally burdened with evaluation as they are supposed to know the learners best. With changing times and the onset of an information era dawning into a knowledge society, where 'learning to learn' has become the new motto of education and the role of the teacher has shifted into facilitators of knowledge, the teacher-centric evaluation too perhaps seeks a change. Digital evaluation reduces manual labour and the extra load of correcting and scoring papers, enabling teachers to devote themselves more into the fundamental processes of teaching-learning and research, two phenomena which, now are of utmost importance in a twenty-first century teacher's challenging career.

Historically, the Indian Education system has often been criticized for adoption of partiality and bias in its marking system across institutions and regions as evaluation rested solely in the hands of educators. This element of bias can be effectively reduced when evaluation is digitized. Teachers in the knowledge society are partners in learning and guiding forces rather than superior figures and dispensers of knowledge. Educators are now progressively dedicating themselves into research and development related endeavours rather than focusing solely on classroom lectures. Though evaluation culminating into deciding results for their students is a cumbersome task filled with immense responsibility for most, some use evaluation subjectivity as a weapon to dominate over the powerless students for whom the struggles are a never-ending saga of pleasing the dictatorial teacher.

> "...most often it is observed that some teachers are lenient and others are strict in marking which lead to leniency error or severity error of measurement. It is these types of errors which affect students' score and make it non-comparable among students from different teachers from the same and different institutions. The most objective assessment devices are used the less subjectivity would be in marking."
> [Singh 2011, p 191]

The advantages of digitization are "being increasingly harnessed in the field of public examinations" in India "particularly because of ever-increasing volume of work" (Srivastava 2001, p 184). A national standard system of a digital examination evaluation like that adopted presently by the CBSE in National Eligibility Test, can be developed for all levels by a panel of experts and teachers

participating from various regions of the nation so that all such allegations of bias and impartiality against teachers can be effectively mitigated. Even in the ancient 'Gurukula' system, Guru's or teacher's job was confined to teaching and guidance and evaluation was left to success or failure in real and practical performance-based challenges of life.

Digital evaluation is practiced by many countries in the world at present and it is high time that India too embrace this welcome change. The relative merits of a digital evaluation over conventional evaluation practices abound as opposed to the relative demerits. The technological issues for which digital and computer-based systems are criticized by those resenting progress, can be further diminished to a minimum after a careful and systematic investigation into the causes underlying such problems such as, orientation to teachers in integrating technology into the process of evaluation both during pre-service and in-service training; other precautions may include Standard Trial Run (STR) when any system processes results digitally, and periodic scrutiny and inspection of the processes involved in digital testing. Once the awareness develops regarding such alternative means of assessment that reduces manual labour while having better reliability and validity in terms of output, the teaching practitioners of today will surely walk on the digital path.

The Continuous and Comprehensive Evaluation paradigm came across as a reaction against the atrocities of the external examinations which was merely summative in nature. A school-based CCE evaluation pattern was introduced by the Central Board of Secondary Education (CBSE) to incorporate parameters of a total and holistic growth and development for assessing students and not merely testing achievement or memory as has been the age-old practice of assessment. The Mudaliar Commission report (1952-53) suggested there should not be too many external examinations and internal tests and the school records maintained by teachers should be taken into consideration and due credit should be given to them.

The Indian Education Commission/Kothari Commission (1966) recommended comprehensive evaluation of students by using various tools and techniques in internal or school based assessment. The National Policy on Education (1986) recommended integrating evaluation with daily teaching through CCE as a means to ensure a method of assessment that is a powerful instrument for improving teaching and learning; followed by the Programme of Action (1992) which focused on ensuring a valid and reliable measure of students' performance, use of grades instead of marks and setting up of the National Evaluation Organization to arrange national tests for comparing performances across regional boundaries and norms.

The National Curriculum Framework (2000) stressed on the need of a school-based evaluation, comprehensive and continuous in nature, covering both scholastic and co-scholastic aspects and the use of formative evaluation in the form of diagnostic tests, mastery tests and criterion referenced tests and the National Curriculum Framework (2005) repeating the need for a 'honest' CCE model of evaluation to promote 'Learning without Burden'. According to Rashtriya Madhyamik Shikshya Abhiyaan launched in 2009, it is necessary to reconstruct and redesign examination system with attributes like flexibility where a student can achieve learning in a flexible time frame and accumulate credits, eliminating tests of fixed duration and adopting continuous and comprehensive evaluation. The practice of mark sheet indicating marks in certain subjects must be replaced by a portfolio that would accommodate a student's performance in variety of domains like life skills, academic/non-academic and vocational subjects, personal qualities. The portfolio should be comprehensive, revealing the total being of the student. The flexibility in evaluation system and also the CCE paradigm indicated in varying degrees in the mentioned educational policies and reports can be far better addressed through a digital testing developed through use of computer software. The accuracy and detail of each individual student's performance can further be recorded digitally by teachers in learners' e-portfolios to monitor progress and offer remedial instruction.

Computer-aided Assessment (CAA), less commonly referred as e-assessment is gaining momentum globally. It ranges from multiple choice tests to more sophisticated digital systems where feedback can be geared towards a student's specific mistakes (Pradeep Kumar, 2010) or the system can navigate the student through a programmed learning instructional process. The following quote illustrates the meta-evaluation data that digital evaluation may harness that can aid in evaluation researches for practitioners. Since the primary purpose of measurement is learning and of evaluation is diagnosis (Smith, 2005), computer-based/digital evaluation emerges as the most feasible solution.

It is opined by Sharma (2006) that besides accuracy, validity and reliability, the quality of a good measuring technique is "administrability, scorability, and economy as practical criteria" and "comparability in the use of test and evaluation results" as a credibility index. Compared to manual evaluation, digital evaluation scores high on these grounds.

Hence, computers have been assisting in the operation of examinations in a very laudable measure and greater possibilities for the optimum utilization of this technology should be explored in the context of educational evaluation. A variety of digital entrepreneurship, specializing in on-line examination, alongside free or paid teacher-friendly/user-friendly evaluation software is presently available and, such technology will keep multiplying in future.

It will replace traditional testing on account of cost-effectiveness, ease of administration to bulk recipients, being time-saving, paperless and a safe repository for future use. Often the most common criticism and challenge to a digital evaluation that arises in the Indian context is the lack of exposure to anything digital, especially among the

majority of rural and technologically backward population of learners. The defense to this case stands strong in the 'Digital India' mission launched in 2015 aiming at digital literacy of the rural population and as Verma (2006, p7) mandates that in today's digital world, "schools must prepare students with the new skills and ideas that are needed for living and working in a digital society".

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3. EVALUATION IN THE DIGITAL WORLD

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Abstract

Formative assessment, assessment for learning, involves checking in with students during the learning process to see if they understand concept or standard, before holding them accountable for mastery and moving on to the next concept or standard. This process can be used in the classroom during the lesson or across a subject area as teachers of the same subject create and administer common formative assessments and then use the data to make instructional decisions before moving on. Research has shown increases in student Achievement with the use of formative assessment.

Introduction

There's a term that has been floating among educators for some time, and it's called formative assessment. I've been asked by many teachers about formative assessment and how it can be used in their classrooms to improve their students' writing. In my next blog series, I'd like to share with you the what, why, and how of formative assessment. Let's start off with the basics first to get our feet wet. I'll dive into the natty gritty for you in three more follow-up blog posts. Formative assessment is a process that happens throughout the learning. It is used to make adjustments by both yourself and your students so that learning goals can be met. It occurs before a summative assessment. Formative assessment data is not meant to be used to collect formal grades.

Formative assessment

The use of assessment to provide feedback to teachers and students in the course of learning is called formative assessment. Information gained through informal assessments provides opportunities for teachers to make adjustments to the ways in which they deliver instruction. For example, they may reteach a concept, use alternative instructional approaches, or offer more opportunities for practice and reinforcement. These activities can lead to improved student success.

Formative assessment centers on active feedback loops that assist learning (Black &William, 2004; Sadler, 1989; Shavelson, 2006). Teachers use formative assessments both to provide **feedback** to students about their progress and to **guide decisions** about next steps in the learning process, thereby closing the gap between the learner's current and desired states. Popham (2008) defines formative assessment as "a planned process in which teachers or students use assessment-based evidence to adjust what they are currently doing" (p. 15). The operative word in this definition is *process,* in that formative assessment is happening throughout the learning, as opposed to summative

assessment, which is often a one-time event that occurs at the end of a learning unit and is used to make judgments about student competence.

Advantages of Formative Evaluation:

There are a number of advantages when formative evaluation is considered, a few points are jotted down for your reference.

Develops knowledge:

The main intention of formative evaluation is that it helps in development of knowledge and skills for the learners. With this category of evaluation, the instructors, leads or teachers are able to identify the needs of the individuals and direct them towards their objectives or educational goals.1 The individual's hindrances and difficulties are found out by this method and appropriate remedies are applied to overcome them. With evaluation the upcoming lesson or task is also planned. With formative evaluation, an assessment is offered by the instructor or teacher to make sure that the individuals have mastered the concept that has been taught to them.

Complex settings: Complex intervention in complex settings is quite difficult to be implemented. Another tough task is the managers, researchers and others to possess a complete understanding about what must be implemented, the best strategy to be followed, elements those hinders or facilitate the process and the reason for any strategy to work or not work in an implementation process. All these queries are solved with the help of formative evaluation.

Complex interventions are refined: Formative evaluations are ones that are beneficial for a number of interventions but specifically they are useful for refining wide-range and composite interventions. For example, primary care practices are ones that always implement numerous components in a concurrent manner. Hence formative evaluations are employed in such science

Disadvantages of Formative Evaluation:

With the various advantages there are also few disadvantages when formative evaluation is considered.

1. Time consuming and requires resources:

Formative evaluation is considered to be time consuming process if they are followed on a monthly, weekly or daily basis. These evaluations are time and resource intensive, this is because they are in need of frequent gathering of data, analysis, reporting as well as refinement of new implementation and how effective it should be.

2. Tiring process1: Planning and exercising can be tiring process and few recommendations cannot be implemented at all times. Hence this disadvantage leads many individuals to avoid the practice.

3. Trained and qualified professionals: In order to process with the formative evaluation well qualified and trained individuals are required so that formative evaluation is carried over successfully and ended.

The Six Elements of SAS

Here is a brief overview of the six elements of the Standards Aligned System:

- **Big Ideas:** Declarative statements that describe concepts that transcend grade levels. Big Ideas are essential to provide focus on specific content for all students.
- **Concepts:** Describe what students should know (key knowledge) as a result of this instruction specific to grade level.
- **Competencies:** Describe what students should be able to do, key skills, as a result of this instruction, specific to grade level.
- **Essential Questions:** Questions connected to the SAS framework and are specifically linked to the Big Ideas. They should frame student inquiry, promote critical thinking, and assist in learning transfer.
- **Standards:** Statements that define what students should know and be able to do as a result of instruction.
- **Assessment**- offers tools and resources to support the process of assessing, evaluating and documenting student learning in order to improve professional practice and increase student achievement. Four types of assessments are defined in PA:
- S**ummative Assessment:** Seeks to make an overall judgment of progress made at the end of a defined period of instruction.
- **Formative Assessment:** Defined as classroom-based assessments that allow teachers to monitor and adjust their instructional practices in order to meet the individual needs of their students.
- **Diagnostic Assessment**: Ascertains, prior to instruction, each student's strengths, weaknesses, knowledge, and skills.
- **Benchmark Assessment:** Measures achievement of important grade level content periodically during the year in order to provide feedback about how students are progressing towards demonstrating proficiency on grade level standards.
- **Instruction**- provides resources and interventions to facilitate achievement of the standards for all students.
- **Safe & Supportive Schools**--Safe & Supportive Schools supplies resources and exemplars to promote active student engagement in a safe and positive learning environment. Areas within the element include the following:
  - ✓ **Engagement:** Interpersonal relationships, respect for diversity and participation in school
  - ✓ **Safety:** Emotional safety, physical safety, and substance use

Conclusion

Where curriculum principles were less evident, or not evident, and teaching as inquiry was not well supported at a school level, these leadership influences were absent. Curriculum development was much less robust and coherent and teaching as inquiry was poorly understood. The critically inquiring culture fostered in the higher functioning schools was not apparent in these schools.

In classrooms where the curriculum principles were fully enacted and levels of inquiry were high, teachers created opportunities for students to develop self-responsibility. Students reflected on their learning and decided on appropriate next steps or goals. Underpinning this were the high expectations teachers had of students as capable and competent learners. In some classrooms, teachers made use of student feedback, along with other relevant data, to adjust the programme for students.

Teachers had acquired a good foundation on which to base their practice. They knew about the components of the curriculum and were able to carry out teaching as inquiry in their classrooms. They had been well supported by leaders in doing these things. Some work is still needed before most teachers develop robust evaluation practice as described in the learning inquiry phase of the teaching as inquiry cycle. They would also benefit from further exploration of the curriculum principles, particularly community engagement, Treaty of Waitangi, and future focus, so these principles are able to be enacted in the class curriculum.

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4. AN OVERVIEW OF PEDAGOGICAL EVALUATION IN DIGITAL LEARNING

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Abstract

Digital learning assets have been broadly used in educational activities extending from schools to universities and higher educational institutions. The evaluation of the superiority of these resources plays an important role in designing and implementing smart educational content. In this paper, we present the structure and the theoretical foundations to explain utensil for examination and evaluation of the excellence of digital learning resources. In order to invite pedagogues and computer scientists to think more about the evaluation of the quality of educational learning resources used in face or online (e-learning), the study presents and discusses the evaluation criteria that can guide and direct all design of evaluation process designed for easy use. The paper demonstrates the practices related to the evaluation of pedagogical quality and describes how this dimension can be taken to evaluate digital learning assets. The outcomes of this study are projected to support pedagogy agents to develop evaluation process, because these agents are not only concerned to design, but also to evaluate their process. ***Keywords****: Digital learning assets, Evaluation, Evaluation instrument, Quality, Criteria.*

Introduction

Greets to the prospects offered by Information and Communication Technology (ICT) in education today, the number of digital learning assets available is certainly increasing. Many educational products, such as multimedia digital learning resources and educational websites, are elaborated within the framework of a campus-based or online education (e-learning). We propose in this study to make an involvement in this area by presenting the structure of an evaluation for the quality of digital learning resources, used in a campus-based or online education (e-learning), and exposing different aspects and evaluation criteria to integrate into this structure.

The principal section of this paper presents the context of the study and explains about the adopted approach to extract the different aspects and evaluation criteria for digital learning resources. In the following sections, we outline how the structure of the evaluation process can be conceived to evaluate easily digital learning resources. Finally, we conclude by discussing some of the larger implications of evaluation of digital learning resources and the benefits of developing an evaluation process to meet the changing demands of quality assurance and quality improvement for digital learning resources.

Context

The production of digital learning resources occurs in a variety of settings, many of which lack quality control procedures or guidelines. A brief survey on these resources offers abundant evidence that authors frequently fail to apply design principles that have been established in the fields of instructional design, instructional psychology and the learning sciences. Further, many resources appear never to have been learner-tested or subjected to other processes of evaluation. In our view, there is a quality problem that demands a multifaceted solution involving better education of digital learning resources designers and design and

development of models that incorporate quality assessment. However, the evaluation of digital educational resources remains an arduous and difficult task. There are significant challenges to effective evaluation because the processes and the evaluation tools should maximize the pedagogical support and the graphical aspect

Methodology

To carry out our study, which aims to present aspects and evaluation criteria to evaluate the quality of multimedia and digital learning resources and propose an example of an evaluation tools, our approach is to consult a number of digital educational resources and visit educational websites all dealing with the same subject, and then identifying elements which enable to compare and evaluate them. We consider quality criteria specifically for multimedia learning resources, which we define as digital learning resources that combine text, images and other media.

1 Pedagogical quality aspect

The evaluation of pedagogical quality is of paramount importance. To enhance learning and enable the learner to construct his/her knowledge, a digital learning resource must refer to a differentiated pedagogy, active and learner-centered which promotes the development of skills.

The evaluation of the instructional design of the resource involves an examination of its goals, objectives, teaching strategies, and assessment provisions. This section examines therefore the various facets of the educational dimension brought by the digital learning resource.

The main criteria that will face each product during the evaluation are:

2 Pedagogical formulation

Pedagogical formulation represents a concern of comprehension by learners who use digital educational resources for learning. This formulation is characterized by the quality of simplification of content, explanation of acronyms, glossary provided, the presence of summaries or abstracts as well as the use of diagrams, figures and illustrations.

3 Pedagogical construction

Pedagogical construction evaluates whether the structure of the digital learning resource promotes its use in a pedagogical context through the presence of appropriate interactivity, logic of organization, ease of orientation, ease of browsing and readability of pages.

4 Pedagogical strategies

This criterion evaluates the teaching strategies adopted. Developing an appropriate instructional strategy lies in designing and organizing learning activities based on techniques, methods, approaches and diverse educational models to handle different learning styles.

Teaching strategies should be based on active teaching approaches (constructivism, socio-constructivism) to build meaningful and motivating situations for learners and engage them actively in learning.

The main sub criteria that will face each process during the evaluation of pedagogical strategies are:

Instructional goals and learner objectives are clearly stated:

Is the overall purpose of the resource concisely stated, if appropriate, with specific objectives stated for specific components? Based on their experience, evaluators must judge whether the resource would fulfill its intended purpose and meet the learning objectives.

The resource is suitable for a wide range of learning/teaching styles:

The resource uses a variety of approaches (behaviorism, cognitive, constructivism, socio-constructivism) and is flexible in its application (e.g., encourages teacher intervention, student contributions, co-operative learning, discovery learning, collaborative teaching). Materials and suggested activities encourage the use of a variety of learning styles and strategies (e.g., concrete, abstract, oral, written, multi-sensory, opportunities for extension, inclusion of explicit aids for retention).

The resource promotes student engagement:

The resource incorporates aids to accessibility (advance organizers, summaries). Questions should encourage reflection. Questions and activities within the resource should attract attention and increase understanding.

I. The methodology promotes active learning:

The methodology promotes critical thinking, research skills, problem solving, group decision making, etc. Students assume increased responsibility for learning. For the decision-making actions, the number of decision options should vary according to student needs.

II. *The resource encourages group interaction:*

The resource uses group-based learning methods such as cross ability groups and co-operative learning.

III. *The resource encourages student creativity:*

Use of the resource encourages students to develop unique interpretations or solutions.

IV. *Pedagogy is innovative:*

The resource demonstrates a fresh approach. Imagery, layout, presentation, pace, topics, suggested activities, and instructional design all serve to promote student interest in the content.

.5 Assessment methods

The assessment methods are tools implemented for evaluation, teaching monitoring and learners support, such as exercises and tests. This criterion aims to evaluate the assessment practices used. It also helps to ensure whether the assessment is promoted or opposes the emergence of learning.

Conclusion

Learning with digital learning resources takes place in a highly different context from traditional learning, where

human interactions become mediated. In this modern era where the learner finds himself alone in front of the machine, careful attention to the presented digital content quality is particularly important. However, this quality is not always assured. Hence the digital learning resources often suffer from lack of regulation of content validity, reliability, and credibility. The efficacy of this technique is directly dependent on the validity of the evaluation tool used to generate the quality ratings. Quality criteria for summative evaluations have the potential to drive improvements in design practice. To this end, we identified in this article the sections and criteria to evaluate digital learning resources. Being aware of this criteria, that can affect resources quality, is an essential step towards elaboration.

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5.ASSESSMENT IN THE DIGITAL AGE

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Abstract

Assessment is universally recognized as one of the most important – and powerful – elements of an educational experience. It is also seen as one of the hardest to reform. However, there is an increasingly demonstrated need for assessment reform, particularly if it is to keep up with other theoretical, cultural and technological developments affecting teaching and learning. Current assessment methods, especially the heavy emphasis and priority afforded to high-stakes summative assessment, are often described as outdated, ineffective and at worst damaging. The idea that digital technologies can help transform education and specifically assessment is not a new one. New technologies and tools have long been seen to open up new possibilities due to their potentially beneficial characteristics or affordances, such as offering more personalized, instantaneous or engaging assessment experiences. In many cases this potential has been realized and demonstrated benefits. However, the literature suggests that the use of digital technologies has yet to be 'transformative' and is often used via traditional assessment methods or within pockets of innovation that are not widespread. Thus, there remains a need to better understand how technologies can support educational changes and what affordances are most useful to support the outcomes educators envisage within the current educational context.

Introduction

Assessment sits at the heart of the learning process, as it provides observable evidence of learning, determines student progress and demonstrates understanding of the curriculum. More broadly, it could be said that an institution, culture, or society depicts its conceptualization of learning and ideal future citizens by how it creates and uses assessment. Recently, many scholars in the field have been warning that current assessment practices have forgotten their core purpose: to support learning. Rather, assessment is often seen to be preoccupied with qualifications and narrow achievements, and critiques of current assessment systems abound, from both scholars and dissatisfied students.

Why Assessment?

Assessment is essential not only to guide the development of individual students but also to monitor and continuously improve the quality of programs, inform

prospective students and their parents, and provide evidence of accountability to those who pay our way."

Assessment should mirror good instruction; happen continuously as part of instruction; and provide information about the levels of understanding that students are reaching. Assessment is a critical step in the learning process. It determines whether or not the course's learning objectives have been met. A learning objective is what students should know or be able to do by the time a lesson is completed. Assessment affects many facets of education, including student grades, placement, and advancement as well as curriculum, instructional needs, and school funding.

Computer-based testing is only one area of technology-enhanced assessment. While these early tools remain highly visible, new practices are expanding both the use and purpose of technology enhanced assessment that include management and processing of results, learning analytics, and tools that enable instant formative feedback and collaboration on feedback processes. Many of these align with the recognition that feedback and assessment should become more deeply embedded within the teaching and learning process.

Similar tools can be used for measuring more complex thinking skills and learning processes, such as immersive learning environments like simulations and serious games, Web 2.0 tools, use of mobile and handheld devices, learning portfolios and electronic voting systems or learner response units. Web 2.0 tools also provide opportunities for collaboration and new forms of connectivity and communication in the teaching and learning processes though the demonstration of their use is not yet wide-ranging in the literature. These tools can be seen to have contributed to some shifts in assessment that combine formative and summative purposes, such as use of portfolios to track learning, an increase in self and peer assessment and more assessment of group work and performance. Despite these new developments, studies have shown that the tools generally being used are rarely the more sophisticated ones that allow for greater flexibility, measurement of complex skills or personalization.

Finally, technology enhanced assessment practices have not tended to be spread evenly across subjects or levels of education. Historically focused on subjects with 'questions with well-defined answers' such as maths and science, technology enhanced assessment's breadth and scope across subjects is also now increasing. Additionally, much of the research identified in this review focused on higher education environments and seemed to suggest that HE is currently where technology enhanced assessment uptake or innovative practice happens more regularly than in school environments.

What Technology Offers?

Technology-enhanced assessment and feedback refers to practices that provide some, or all, of the following benefits:

- Greater variety and authenticity in the design of assessments.
- Improved learner engagement, for example through interactive formative assessments with adaptive feedback.
- Choice in the timing and location of assessments.
- Capture of wider skills and attributes not easily assessed by other means, for example through simulations, e-portfolios and interactive games.
- Efficient submission, marking, moderation and data storage processes.
- Consistent, accurate results with opportunities to combine human and computer marking.
- Immediate feedback.
- Increased opportunities for learners to act on feedback, for example by reflection in e-portfolios.
- Innovative approaches based around use of creative media and online peer and self-assessment.
- Accurate, timely and accessible evidence on the effectiveness of curriculum design and delivery.

Adding in Technology: Designing Assessment in A Digital Age

Understanding more about the close relationship between assessment, feedback and effective learning is the first step towards assessment practices that empower rather than in habit learning. Technology offers a new perspective through which this relationship can be explored.

This report proposes that technology should enhance assessment and feedback practices rather than replace highly valued strategies such as face-to-face tutorials. However, the greater scope offered by technology can add value to a wide range of assessment-related activities.

The technology may be designed for the purpose (such a son-screen assessment delivery systems or originality checking software) or adopted from a pool of widely available generic software (such as Web 2.0 technologies) and familiar hardware (such as digital cameras or handheld devices). The arrangement of available options is broad, and becoming broader.

Particular benefits might be experienced in the following areas:

- Dialogue and communication: Online interaction via forums, blogs, email and voice boards can enrich feedback and help to clarify learning goals and standards. Distance and time constraints can be overcome.
- Immediacy and contingency: Interactive online tests and tools in the hand (such as voting devices and internet connected mobile phones) can facilitate learner-led, on-demand formative assessment. Rapid feedback can then correct misconceptions and guide further study.
- Authenticity: Online simulations and video technologies can increase the discriminatory power of assessment and support risk-free rehearsal of real-world skills in professional and vocational education.

- Speed and ease of processing: Assessment delivery and management systems can provide instant feedback to learners and practitioners; yielding robust information for curriculum review and quality assurance processes. Interoperability standards can facilitate transfer of data between institutional systems.
- Self-evaluative, self-regulated learning: Activities such as peer assessment, collection of evidence and reflection on achievements in e-portfolios and blogs can generate ownership of learning and promote higher-order thinking skills, in turn improving performance in summative assessment.
- Additionally: Technology can make possible the assessment of skills and processes that were previously difficult to measure, including the dynamic processes involved in learning. Technology can also add a personal quality to feedback, even in large-group contexts, and through efficiencies gained from asynchronous communication and automated marking, can enable practitioners to make more productive use of their time.

Conclusion

Across and beyond the curriculum, digital technologies are changing what is being taught and learned, how that process happens and what students are expected to know and demonstrate. However, many argue that educational institutions appear slow to catch on or catch up when it comes to assessment, despite growing agreement that assessment needs to be more closely linked to learning theory, embedded within teaching and learning and acknowledge new digital practices. Many assert that current schools are not adequately preparing our children for the future and they leave their formal education ill-prepared to tackle complex problems in the real world. Gee and Shaffer (2010: 4) suggest that it is the assessment's system focus on standardized tests that impedes schools from 'entering the 21st century in our classrooms'. These educational challenges seem daunting but also present a prime opportunity to consider how to develop an assessment system that responds to these changes and reflects broader educational goals.

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6. COMPUTERIZED EVALUATION IN CCE

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Abstract:

This paper reveals that ICT can play a vital role in CCE system by providing effective support to formative evaluation in terms of rubric evaluation for learners' assignments, projects and teachers' lessons, power point presentation and CBDT giving enough opportunity to the teacher to self-evaluate their own teaching as well as diagnose their students' difficulties and provide subsequent remedies to them in a more practical way. In addition, learners can themselves evaluate their performance efficiently. By availing the opportunity of self training on 'CCE implementation' ICT makes the relevant CBSE directives and the knowledge of use of various evaluation tools and techniques crystal clear to all teachers in a more effective and economic way. It can establish CCE as a successful flexible examination system by systematizing projects, assignments and other activities meant for the purpose of evaluation and thus reducing learners' stress. In addition, ICT helps teachers to accomplish their paper work and manage their time adequately by assisting them to track their learners' holistic development (both scholastic and co-scholastic) in a progressive and cumulative manner. Through e-portfolio and rubrics teacher and the school authority can assess learners' co-scholastic skills in a more effective manner. However, to make CCE internally accepted and really successful operational knowledge of ICT integrated evaluation tools and techniques on the part of teachers is essentially needed.

Keywords: Continuous and Comprehensive Evaluation, Flexible, Assessment, Scholastic skills, Co-Scholastic skills, Holistic learning

Introduction

Continuous and Comprehensive Evaluation (CCE) refers to a system of school based evaluation of the learner that covers all aspects of the learner development. This development profile of the learner is facilitated through continuous assessment of one's learning content, the responses, the nature and success of its applications and the behavioral outcomes and further by the measurement of the holistic development through comprehensive tools of assessment. The term 'continuous' implies that evaluation of diverse aspects of learners' growth and development is 'built into the total teaching learning process and spread over the

entire span of the academic session. It means regular assessment of every student. It is more a process than an event. Such assessment would help to diagnose learning gaps and pave the way for remedial measures. The second term 'comprehensive' acknowledges to the fact that learning can be both formal and informal; it can occur through several facets of activities and therefore the learning profile of the learners needs to be assessed in different contexts of learning both formal and informal. Thus it endorses the expression of learning through a variety of activities and hence their assessments through multiple tools of assessment. In short, it is intended to scan the entire learning map of each student.

As a result of government policy over reform in Indian educational system, the CBSE has introduced new system. CCE to the secondary classes since then lot of feedback are coming to CBSE in contrast to the CCE pattern. The parents and general public are showing unsatisfactory to this present system. On the contrary the eminent educationalists are keep on advocating in favor CCE system. The new reform in Indian education in quite acceptable but it will take some time for the people to realize the importance of the system. So CBSE has introduced a mentor program to literate the teacher, student and common people of Indian over the present issue.

Why CCE is necessitate to acquire

In the past system, the student undergoes severe stress and strain in the wake of competition. All parents want their child to be in the top ranking, that leads the child in strain. Everyone want their children to become doctor, engineer, manager etc. there are lakes of profession but leaving all those opportunities all are running behind these three options which is the deciding factor for high expectation.

Making use of this huge demand of these courses, the private schools and universities earning huge money. If the children score low marks and does not fulfilling their parents' wishes or expectation, then their relation breaks up many children committing suicide attempt only because of getting low marks or failing in the examination. There is a question raised by eminent educationists that how a student scored 71is better than those scored 70? Is there any yardstick to exactly measure the mental level of the child? The answer is definitely 'no' the numerical marking is largely affected by subjectivity.

CCE differ from past system of education

There are three domains to be taken into consideration for evaluating a child

1. Cognitive domain
2. Affective domain
3. Psychomotor domain

Cognitive Domain

The cognitive domain deals with the mental level of the child. In the past system of education cognitive domain is given more importance in comparison with other domains. All other two domains are simply neglected. If a child good in academics, then he/she will be declared pass otherwise the child gets failed. Every child born with its own capacity to deal with different areas. So, evaluating a child in only one area is totally obstacle.

AFFECTIVE DOMAIN

In the past system of education there is no such scope to asses a child over this affective domain. This domain mainly deals with the social and emotional skill of child. How a child making relationship with their teacher, friends and parents. It also envisages their emotions such as anger, patience, happiness etc.

Psychomotor Domain

In the past system we do not any scope to assess a child over this psychomotor domain. This domain mainly deals with the action skills such as drawing, making graphs, making useful things etc. this domain is also not given equal importance as the cognitive domain.

Main Aspects of CCE

To overcome from all these drawbacks in the past system of education, CCE has been introduced by the central board of secondary education up to the secondary level with effect from 2009-2010 in this new pattern, numerical markings were abolished instead grading system introduced. The students are assessed according to the grading system.

Purpose of CCE

To integrate teaching and evaluation and to test those skills and abilities which cannot be tested through return examinations at end of the course. For this purpose, Continuous, comprehensive internal evaluation should be properly diversified so that through it we can test the:

- Writing ability of the student.
- His participation in discussion, seminar, etc.
- His participation in field work, project work etc.
- To encourage students to apply themselves rigorously to their student
- To enable the teacher to realize the effectiveness of teaching – learning process
- To serve as a feedback for improving the content of the courses method of teaching and teaching – learning process in general.

Merits of CCE

- More valid.
- Regular and punctual
- Discipline
- More reliable
- Motivational value
- Diagnostic value
- Basis of scholarship
- Positive results

Demerits of CCE

- Timing consuming
- Heavy work load of picture
- Incomplete without external examination
- Increase in number and intensity
- Shirker of work

Importance of CCE

The scheme of CCE is an effective tool to enhance the quality of teaching learning causes in the school. The emphasis is now ensuring that every child not only occur the knowledge and skills but also the ability to use this competency in realize situation. Thus emphasis is now both on knowledge as well as on performance. The CCE scheme refers to school based evaluation of student that covers all aspects of the student's development.

The grading system is-	
9.0-10.0	A1
8.0-9.0	A2
7.0-8.0	B1
6.0-7.0	B2
5.0-6.0	C1
4.0-5.0	C2
3.0-4.0	D
2.0-3.0	E1
0.0-2.0	E2

Digital wise CCE

It is suggested that the paper too should have a compulsory component of evaluation focusing on computerized evaluation. Now a day's lot of ICT usage in school administration, teaching learning process but this paper focusing the evaluation using ICT. All the parents should know the student's performance at the end of the academic year but now they know their student's performance through ICT so we can include CCE. Students day to day scholastic and co scholastic performance enter into the digital wise. It is buildup the student's level through parents.

All the teachers organized one activity per week for formative assessment. They organized different types of activities like quiz, group discussion, assignment, project, practical test, presentation, experiment, survey etc. in case of language-reading, recitation, speech and debate, creative writing, thematic appreciation etc. While organizing any activity the teachers took the help of ICT integrated tools and techniques. Students prepared assignments and projects in the form of electronic word document or multimedia CDs which are evaluated systematically by the teachers as well as learners themselves with the help of rubrics based on certain indicators like ingenuity, creativity, interactivity, comprehension, originality etc. and they got immediate feedback of it.

The teachers can also get the feedback about their own lessons and course materials. Thus, the teachers could easily diagnose learners' difficulties and his own teaching limitations and the learners' got enough opportunity of self-evaluation as well as peer evaluation. Moreover, while preparing assignments, projects, presentation etc. students took the help of web 2.0 tools like blogs, wiki, forum etc. which make evaluation more integral to the teaching-learning process.

Students sometimes made power point presentation with the help of digital projector and simple white screen or interactive white board. Teachers with the help of electronic observation schedule or checklist assessed the learners' performance effectively and keep the record of their performance in an organized way which can be retrieved easily whenever required. During group discussion the participants took the help of interactive white board, show certain electronic materials to substantiate their discussion.

The teacher used computer based checklist for assessing their participation. As many as 60 percent teachers expressed that computer based diagnosis test (CBDT) could be used by the teacher for further diagnosis of learners' difficulties after getting preliminary experience from formative evaluation and subsequently providing suitable remedial teaching. CBDT could also be adopted by the teacher for evaluating their own teaching. Physics teacher expressed that for practical test virtual laboratory was used where student could take different types and shapes of objects, change the distance between mirror and object to any extent, change the thickness of the mirror, etc. and can see how such attributes affect the focal length of the mirror as revealed by physics teacher.

About 20 percent teachers expressed that web-based oral test, electronic survey can also be used for formative evaluation. All the teachers conducted paper – pencil test for formative assessment but they differed in frequency- 60 percent teachers 4 times in a year, 20 percent teachers 2-3 times in a year and other 20 percent once in a year. About 80 percent teachers developed computer based test and uploaded over the website of the school. The online tests and automated assessment and feedback provided intrinsic motivation to learners. They opined that web based question bank could also be used for preparing question for the test. The time allowed for the test was one class period (30-35) minutes.

Discussion and Conclusion

From the above discussion it can be concluded that CCE system can be effectively implemented in the school by incorporating ICT with evaluation tools and techniques. ICT integrated CCE system help the teachers to adopt various innovative practices for teaching-learning process (www.Indiagovernance.gov.in) and provide flexibility to use different means of assessing learners, continuous and holistic development.

ICT helps the teacher to go beyond monotony and for better time management by organizing the activities meant for the purpose of evaluation efficiently and keeping track of learners' performance in a progressive manner (Joshi, 2011). Providing alternative approaches of evaluation like power point presentation, online computer based test, e-portfolio, anecdotal records, observation checklist, rating

scale etc. giving immediate and automated feedback to the learners can improve the practices of tests and examination.

Computer based diagnosis test can be used for detecting students' learning difficulties as well as teachers own teaching deficiencies and subsequently adopt appropriate remedial measures effectively. Thus, ICT makes evaluation more inbuilt to the teaching-learning process. Hence, ICT should be adopted as a practical measure to support CCE in achieving its expected objectives efficiently and establish itself as a continuous and comprehensive evaluation system in a real sense of term. However, ICT equipment and software should be made economically available for the school as well as the teachers should have adequate knowledge of operating them for the purpose of evaluation.

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7. REVOLUTION OF DIGITAL EVALUATION IN THE 21st CENTURY

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Abstract

During the last three decades, the world has undergone a massive transformation with the increasing impact of technology in our lives. It is no surprise then that technology has permeated the education sector. The process of applying technology in the Evaluation is termed as Digital evaluation. And in the recent past, (i.e.,) last decade, On-Screen Marking, a technology enabled intervention to assist evaluation of descriptive answer scripts has emerged as the most viable option for streamlining examinations. Successful implementation of On-Screen Marking technology answers the challenges of conventional system in the form of improvement in quality, accuracy, speed and experience of evaluation.

Keywords*: On-Screen Marking, Digital Valuation System (DVS), Evaluation*

Introduction

Technology has pervaded every part of our lives right from our consumer behavior to our communication medium. It is no surprise then that technology has permeated the education sector. The process of applying technology and has announced its presence in it. A field that has most impact on individuals in particular and society in general – Education - is in dire need of some revolution.

Evaluation

The term evaluation conveys several meanings in education and psychology. The evaluation is both quantitative and qualitative process.

According to Hanna "Evaluation is the process of gathering and interpreting evidence on changes in the behavior of all students as they progress through school".

Writing stone states "Evaluation is a relatively new technical term introduced to designate a more comprehensive concept of measurement that is implied in conventional tests and examinations".

It is evident from the above definitions that evaluation in educational context measures cognitive, affective and psychomotor learning outcome.

Digital Evaluation

Digital Evaluation is the process of applying technology to the process of marking/evaluating objective and descriptive answer scripts with a view of improving quality, flexibility, efficiency and transparency while making the scoring process easier. And it helps to minimize the cost, time, effort and human errors in the entire valuation

Common Areas of Digital Evaluation

With the help of, Optical mark recognition also called as optical mark reading (OMR) is the process of capturing human-marked data from document forms such as surveys and tests. The field where it has been using is competitive exams conducted by the education institutions, recruiting agencies in private and government concerns and many businesses and health care agencies use OMR to streamline their data input processes to reduce input error.

There are many other applications for OMR, for example:

- In the process of institutional research
- Community surveys
- Consumer surveys
- Tests and assessments
- Evaluations and feedback
- Data compilation
- Product evaluation
- Time sheets and inventory counts
- Membership forms
- Lotteries and voting

- Geocoding (e.g. postal codes)
- Mortgage loan, banking, and insurance applications

Focus Area

This paper focuses, the area of descriptive script evaluation based on digital mode, in the form of (OSM) On-screen Marking. The Universities and Colleges have to play pioneer role in applying this OSM in their evaluation process because they are the people who have to evaluate examination papers large in numbers.

In Addition to that it is essential for them to publish the result in time. So based on it this paper focuses digital evaluation in the descriptive script

Revolution of Evaluation on Descriptive script

The University of Cambridge first tested digital evaluation for the Local Examinations Syndicate in 1999. It was then adopted as a best practice in 2004. In India, the Central Board of Secondary Education (CBSE) set the ball rolling for faster adoption of this technology in the country. And some of the Higher education institutions have introduced. For instance, all 193 colleges of Visvesvaraya Technological University (VTU) and Bangalore University have started digital valuation System (DVS). At present, this system of evaluation is being used by various educational institutions around the world.

How it works

The digital evaluation system enables evaluators to mark a scanned script or online response on the computer screen itself, rather than on paper. Every process that is followed in the manual evaluation of papers can be replicated in this system. This, along with the rich functionality of the digital evaluation system that enables the customization of tools to the individual user's requirement, increases the ease of adoption. The automation of the evaluation workflow enables the creation of a transparent process that comes with a high degree of security.

It enables evaluators to mark answer scripts at the click of a mouse. In addition, the evaluation process can be monitored through multiple dashboards by senior examiners, and validated further. This results in the reduced threat of errors and malpractices, thus, improving the accuracy of the evaluation process. The ability of the solution to expose annotated answer scripts to students up on request makes the process transparent.

Challenges of Conventional System

There are considerable challenges in the conventional methods of evaluation. Some of these challenges are associated with the sheer volume of examination papers that have to be evaluated.

- **Administrative and logistical** - The manual process of conducting examinations and transporting the answer scripts to the respective marking centers /locations, is not only time consuming, but also requires significant people resources, at various levels. This results in increased costs and efforts while increasing chances of errors / loss / damage.
- **Evaluation errors** - Apart from the logistical challenges, there are also instances where the evaluators' oversight might lead to calculation errors or unchecked questions, pages, misplaced, mutilated answer scripts that can be detrimental to a candidate's career as well as impact the institution's reputation.
- **Regulatory obligations** - Education sector which comes under the ambit of Right to Information (RTI)obligates educational institutions to maintain evaluated answer scripts and retrieve the relevant one within stipulated timelines. This is a challenge examination bodies are trying to address.
- **Reputational damage** - The various scams and allegations get widespread media attention that leads to reputational damage for the institution thus reducing its credibility in the eyes of future aspirants. This is a worldwide scenario with hundreds of legal cases being filed by the students for being awarded wrong grades or ranks.

Digital evaluation provides Solution

Digital evaluation reduces the administrative efforts of the evaluators, along with enhancing the quality of evaluation and making it a transparent and secure process. In addition to this, this system can enable examination bodies to allow evaluators mark answer scripts from their homes without compromising on security, adding to the ease of adoption and reduction in costs. This ability leads to greater convenience for the examining body and its evaluators.

Ease and Convenience – This system is convenient for all the stakeholders, as it replicates all manual processes and in addition provides benefits that are not available in the manual evaluation process. Apart from the administrative ease, the complex processes of multiple marking, question-wise marking and managing evaluation process becomes convenient due to effective automation and digitization.

Security - Transporting scripts back and forth from the examiners to the central hub is not as secure as having this information centrally stored with proper control over access. There is a chance of these scripts being lost in transit, not evaluated, mutilated or damaged. This is where digitization and automation can best provide the needed security with less likelihood of loss or damage. Above all, the scripts are securely scanned and are always encrypted to enhance security.

Total Cost of Ownership -The initial cost of adopting this tool can appear as an addition to the existing costs. A deeper study would suggest how adopting digital marking can offer better Total Cost of Ownership for examination bodies. Proper implementation can reduce the administrative load, cost of transportation and storage of answer scripts. It also

increases the accuracy and transparency of evaluation process and enables evaluators mark scripts from their house / college, thereby, reducing the cost of managing large evaluation centers.

Capacity -Sending physical answer scripts to evaluators in specific examination centers make the conventional process dependent on that pool of evaluators limited by their geographical location. However, once examination responses are digitized, they can be accessed from any geographical location via the internet. This results in the availability of larger expert pool of evaluators and an enhanced capacity for larger scale, faster and more accurate evaluation.

Efficiency and Accuracy - Real time monitoring of answer scripts ensures the complete elimination of administrative errors that include incorrect calculation of marks, un-evaluated questions and as a result, incorrect awarding of marks. Evaluator feedback on the quality of evaluation is possible, adding to the efficiency of the process.

Quality – Digital evaluation can help induce higher quality of evaluation. Designated evaluators can undergo a practice process on actual scripts before they are screened and qualified for evaluation. During evaluation, quality can be consistently monitored through the seeding process. As a part of this process, evaluators will get scripts that are pre-evaluated by expert markers for evaluation. This process of regularly checking evaluation will enhance overall quality of evaluations.

Risk mitigation and regulatory compliance - This solution provides the option of digital storage and handling of the scripts that reduces the risk of misplacement and misuse. The candidate's details are masked on screen, thus helping mitigate potential fraud. As the scripts can be archived and stored in digital form for a longer time, it becomes easy to respond to either legal or RTI requests. This creates transparency within the education ecosystem and reinforces the institution's reputation.

Digital evaluation is a technology that has been widely used in more than 150 countries, including India. Its initial success coupled with the credible benefits that the solution provides to simplify the process and to enhance efficiency and transparency has the potential to snowball into its massive adoption in the coming years.

Conclusion

We are in the fast transition generation of switching over to robotics generation. So in the mere future without the assistance of man power the On-screen marking (OSM) evaluation can be done by the electronics devices with the help of the below mentioned software

- Optical character recognition (OCR) – targets typewritten text, one glyph or character at a time.
- Optical word recognition – targets typewritten text, one word at a time (for languages that use a space as a word divider). (Usually just called "OCR".)
- Intelligent character recognition (ICR) – also targets handwritten print script or cursive text one glyph or character at a time, usually involving machine learning.
- Intelligent word recognition (IWR) – also targets handwritten print script or cursive text, one word at a time. This is especially useful for languages where glyphs are not separated in cursive script.

Apart from the above referred software, the upcoming software may also help to the robotic valuation with its own drawbacks which should be sorted out by human brain in the coming years.

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8. DIGITALIZING EVALUATION

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Abstract

As each and every day is passing by technology is developing with innovative ideas. The field of Education is not an exemption for this drastic change in the technology. Starting from teaching and learning digitalized ideas is holding the roots of this process firmly in its hand. Digital media enables the field of education into simpler and easier one. It converted text books into e-books and black board into digital screen. Likewise, it also has its impact on evaluating the students. Evaluation is not a simple process it has many methods and time consuming one. In this presentation we are going to see how digital media reduced teachers' burden of evaluating the students' performance and also what are the new evaluation techniques used by educationalists to digitalize the process and how effectively it helps teachers as well as students.

Evaluation

There are numerous definitions are available for evaluation in the field of education the most prominent of

them is: Evaluation is the structured interpretation and giving of meaning to predict or actual impacts of proposals or results. It looks at original objectives, and at what are either predicted or what was accomplished and how it was accomplished. So evaluation can be formative that is taking place during the development of a concept or proposal, project or organization, with the intention of improving the value or effectiveness of the proposal, project, or organization. It can also be assumptive, drawing lessons from a completed action or project or an organization at a later point in time or circumstance.

Evaluation is inherently a theoretically informed approach (whether explicitly or not), and consequently any particular definition of evaluation would have been tailored to its context – the theory, needs, purpose, and methodology of the evaluation process itself. Having said this, evaluation has been defined as:

A systematic, rigorous, and meticulous application of scientific methods to assess the design, implementation, improvement, or outcomes of a program. It is resource-intensive processes, frequently requiring resources, such as; evaluate expertise, labor, time, and a sizable budget.

"The critical assessment, in as objective a manner as possible, of the degree to which a service or its component parts fulfils stated goals" (St Leger and Wordsworth-Bell). The focus of this definition is on attaining objective knowledge, and scientifically or quantitatively measuring predetermined and external concepts.

"A study designed to assist some audience to assess an object's merit and worth" (Shuffleboard). In this definition the focus is on facts as well as value laden judgments of the programs outcomes and worth.

Digitalizing Evaluation

The World is not the same as it was first formed it has under gone many vital and phenomenal changes in all these years like that each and every aspect of the world has going through same changes. Development in science and technology not only affected to be clear not only improved that particular field alone but gives us all round development. The field of education is not an exemption to the growing wave of digitalization. In early days' students were carrying loads of books and note to attend the classes but at present due to digitalization carrying books and note books is getting reduced. In foreign countries trend has changed years ago. In India now only educational institutions slowly adopts this method. This change has not only seen in teaching and learning also in evaluating student's performance in the examination.

Though this change has started a long ago in teaching and learning process but the growth is slow in this area of education. On the other in evaluation perspective it has attained half of its growth within short period of time. Two years before universities were conducting their entrance examination following old pattern of marking answers in paper but as of now all major universities have changed their examination style from paper to online tests. This method of writing exams through online has lot advantages than traditional method.

There are no restrictions to the types of tests that can use e-marking, with e-marking applications designed to accommodate multiple choice, written, and even video submissions for performance examinations. Software is used by individual educational institutions and can also be rolled out to the participating schools of awarding exam organizations.

Early adopters include the University of Cambridge Local Examinations Syndicate, (which operates under the brand name Cambridge Assessment) which conducted its first major test of e-marking in November 2000. Cambridge Assessment has conducted extensive research into e-marking and e-assessment. The syndicate has published a series of papers, including research specific to e-marking such as: Examining the impact of moving to on-screen marking on concurrent validity.

e- Evaluation can be used to mark examinations that are completed on paper and then scanned and uploaded as digital images, as well as online examinations. Multiple-choice exams can be either marked by examiners online or be auto marked where appropriate. When marking written script exams, e-marking applications provide markers with the online tools and resources to mark as they go and can add up marks as they progress without exceeding the prescribed total for each question.

All candidate details are hidden from the work being marked to ensure anonymity during the marking process. Once marking is complete, results can be uploaded immediately, reducing both the time spent by examiners posting results and the wait time for students.

Importance of Digitalized Evaluation

Remember school, when tests lasted an hour at a set time of day and the instructor usually had to stay up late to grade them and then write detailed feedback for each and every individual student?

Testing and quizzing can be made unique in a digitalized evaluation by randomizing question and answer order. This is especially useful when a learner has to re-do a test which he/she previously had poor performance on so that the test is not completed by memory, but rather by actually thinking through the correct solution once again. This feature is also useful to produce more variety by using a large pool of questions from which testing can be done, rather than recycling the same questions over and over.

Instant grading and feedback

Grading and giving feedback is probably the most time consuming task for the instructor. It's where the instructor has the ability to comment on the strengths and weaknesses of a learner and enable learning to actually take place! Feedback needs to be good. Digitalized Evaluation will usually allow the instructor to create dynamic feedback depending on the answer a learner will give to a specific question. For instance, in a multiple-choice test if the learner chooses answer B over the correct answer C, the appropriate feedback will be given back to the learner, indicating fault in the thought process, or hints as to why another answer would be more appropriate. This complements point 1 above (i.e.: "Less work to be done") by the instructor because it allows

the learner to get instant feedback on a correct/ incorrect answer, and it saves time for the instructor who can take advantage of automated feedback.

Self-assessment tool

Testing and quizzing online will usually provide the user with results instantly. This is good for students because it allows them to know what they did wrong immediately, what they need to focus on, and how to improve should they have to retake the test.

Keeps learners engaged

Tests and quizzes have always been a motivator to study harder when students know that their progress will be judged upon an exam, a performance review etc. It sets a deadline for when material needs to be learned by and diligent students know they must adhere to that.

Drawback

The inevitable drawback of digitalized evaluation is cheating, occurs in all levels of educational institutions. In traditional classrooms, students cheat in various forms such as hidden prepared notes not permitted to be used or looking at another student's paper during an exam, copying homework from one another, or copying from a book, article or media without properly citing the source. Individuals can be dishonest due to lack of time management skills, pursuit for better grades, cultural behavior or a misunderstanding of plagiarism.

Online classroom environments are no exception to the possibility of academic dishonesty. It can easily be seen from a student's perspective as an easy passing grade. Proper assignments types, meetings and projects can prevent academic dishonesty in the online classroom. However, online assessment may provide additional possibilities for cheating, such as hacking.

Two common types of academic dishonesty are identity fraud and plagiarism.

Identity fraud can occur in the traditional or online classroom. There is a higher chance in online classes due to the lack of proctored exams or instructor-student interaction. In a traditional classroom, instructors have the opportunity to get to know the students, learn their writing styles or use proctored exams. To prevent identity fraud in an online class, instructors can use proctored exams through the institutions testing Centre or require students to come in at a certain time for the exam. Correspondence through the phone or video conferencing techniques can allow an instructor to become familiar with a student through their voice and appearance. Another option would be personalizing assignments to student's backgrounds or current activities. This allows the student to apply it to their personal life and gives the instructor more assurance the actual student is completing the assignment. Lastly, an instructor may not make the assignments heavily weighted so the students do not feel as pressured.

Plagiarism is the misrepresentation of another person's work. It is easy to copy and paste from the internet or retype directly from a source. It is not only the exact wordage, but the thought or idea. It is important to learn to properly cite a source when using someone else's work.

Conclusion

The use of different forms of testing, such as multiple choice tests, fill-in-the-blanks, true or false, or essay questions can also be used to assess the progress of students with different learning styles. Catering to the needs of different learning styles is an important aspect of digitalized evaluation which gives it the edge over traditional learning models. It is a good idea to use different types of material, and varying types of tests and quizzes to engage everyone in an online class.

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9. LITERACY IN THE DIGITAL WORLD

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Abstract

Evaluation is a methodological area that is closely related to, but distinguishable from more traditional social research. Evaluation utilizes many of the same methodologies used in traditional social research, but because evaluation takes place within a political and organizational context, it requires group skills, management ability, political dexterity, sensitivity to multiple stakeholders and other skills that social research in general does not rely on as much. Here we introduce the idea of evaluation and some of the major terms and issues in the field.

Definitions of Evaluation

"Evaluation is the systematic assessment of the worth or merit of some object"

This definition is hardly perfect. There are many types of evaluations that do not necessarily result in an

assessment of worth or merit -- descriptive studies, implementation analyses, and formative evaluations, to name a few. Better perhaps is a definition that emphasizes the information-processing and feedback functions of evaluation. For instance, one might say:

Evaluation is the systematic acquisition and assessment of information to provide useful feedback about some object

Both definitions agree that evaluation is a systematic endeavor and both use the deliberately ambiguous term 'object' which could refer to a program, policy, technology, person, need, activity, and so on. The latter definition emphasizes acquiring and assessing information rather than assessing worth or merit because all evaluation work involves collecting and sifting through data, making judgements about the validity of the information and of inferences we derive from it, whether or not an assessment of worth or merit results.

By 2050 there will be 9 billion people to feed, clothe, transport, employ and educate. We're committed to a growth-driven world economy that must inflate for centuries, supplying limitless consumption to everyone. With new tech, could we add a digital world that helps everyone succeed and prosper while working together? Could we become a successful world where greatness is normal?

The Preface from my new book, Imagine A New Future: Creating Greatness for All, asks: How could we build a positive and successful Digital Earth now?

One-day greatness will be in our grasp. But rather than waiting, can we reach it now?

Here's the good news: digital devices have made your life better. Here's the bad news: although incredibly cool, devices are still in early stages of development. Maybe that's not really bad, when you think of what's coming next.

Until now, the devices you've had in your hands and on your desks have offered quite both usefulness and fun. But you couldn't call it a fully digital world yet. It's not even close.

There are limitations. You switch on your gadgets and wait. Or you have to find the app you want and wait for it. They might have an operating system whose principles you have to follow. They allow you a little creativity, but only a little.

Then your apps or data might not work with another device that you bought, say, last week, or last year. The last time you saw a friend with a new device you don't have, could theirs be better? Maybe

Powerful Problems Drive Powerful Dreams

We have reached greatness, but the magnificent size of our successes will be matched by the size of our growing Crisis of Success. By 2050 there will be 9 billion people to feed, clothe, transport, employ, educate and entertain.

Billions are committed to a growth-driven world economy they expect to inflate for centuries to come. As we pursue unlimited growth, our limitless consumption threatens to crowd out everything else on Earth. We are warming the climate, overspending our financial resources, requiring more fresh water than we have, increasing income inequality, diminishing other species and triggering shockwaves whenever we can't cope with a problem.

Billions of people are at the "bottom" of the economy. The middle class is declining in advanced societies. Youth underemployment is epidemic in many countries. The forecast is for billions to remain stuck for their whole lives.

Many believes today's leaders can improve this, though today's leaders are increasing their power and digital surveillance. Leaders want new options as much as everyone else.

Clearly, there is room to dream about a more successful world along with new technology.

Can a New Digital Window Display a New Future?

This new option started in 2007 with big questions: Can we envision a world where tech helps everyone succeed and prosper? Can that world be designed and built now, without waiting for "the future" to arrive?

The Expand diverse grew steadily through years of private and confidential tech and IP (Intellectual Property) development.

Our world is full of screens. We keep them in our hands, purses and pockets, next to our beds while we sleep, and surround ourselves with screens on our desks and counter tops. Our TV sets are morphing into interactive screens as we put them online so they display everything for free.

What if all our screens, everywhere, were a two-way networked system that turns the Earth into a digital room with everyone in it? What if that networked system brought everyone the world's best services, resources and knowledge based on what we do, as a normal part of everyday life?

This new option started in 2007 with big questions: Can we envision a world where tech helps everyone succeed and prosper? Can that world be designed and built now, without waiting generations for that future to arrive?

Let's dream a little. Let's dream about technology we could build; about a world we could enjoy.

Turn On a You-Centered Digital World

If your future devices were continuous, your control over all your devices, and the continuous digital world they could open for you, could Expand exponentially.

You switch between multiple screens. When you leave your old screen it stores "where" and "who" you are, then turns off. Your new screen recognizes you, turns on, retrieves "where" and "who" you are, puts you "there." It is truly automatic.

All sorts of things are in front of you — with you. They could be people, services or places. They could be apps or software, digital content (books, TV shows, movies, music, recorded videos and more), games or live video from

events worldwide. They could even be other devices and sources you control remotely.

In fact, it's so real that your "shared spaces" move with you across your screens, and become one of your realities. It's the digital world you choose, where you can live. Always ready for you to use in whatever ways you want.

Technology is about to move much faster and converge with entertainment, until life is entertainment and entertainment is life. (Or dare I say it, your lives.)

Much of your life is already you-centered. Next your digital life will let you become the person (and people) you've always dreamed of becoming.

Much of your life is already you-centered. Next your digital life will let you become the person (and people) you've always dreamed of becoming.

For example, expand verse technology includes a workaround to death. Since medical science can't extend our lifetimes to hundreds and thousands of years, the Expand verse offers multiple identities. Would you consider enjoying multiple lives in parallel? This won't be for everyone, but for those who can't get enough out of one short life, it could be their ticket to more lives and a better way to be alive.

- **Promotes Independent Learning for the Students**
  Students can already learn from their own even without the assistance of their parents and teachers. They are just going to surf the internet in order to look for the lessons they need to study. Quick accessibility and well-equipped with the skills and knowledge in operating a computer would be very helpful for the students.
- **Easier Access to Information**
  The need for heavy books to be brought back and forth from school and home is no longer needed with technology. The books can stay in the classroom because the information that they need is easily accessed on a computer.
- **Promotes Exciting Way to Educate Students**
  Since there are lots of images, videos and other graphics and text that may be found in your computer, more students would feel the excitement in studying through the use of the gadget. This is very important in order

Disadvantages of digital technologies

- **Laziness in study**
  Computers make is so easy to find answers that students barely have to look for them. This may result in them having poor study habits and developing a lazy attitude toward their education.
- **Forgetting the Basic Way of Studying**
  They would no longer rely on the books that are lent by their teachers for them to study since they are already interested to study using the computer. Even simple problems and homework that they need to answer, they are more of seeking the assistance of computers already.
- **Discovering Unusual Things in the Computer**
  Allowing the students to surf the internet doesn't necessarily mean that all the things that they are going to discover are good for their mind and studies. There are several things that are found in the internet which are not good for the students hence they need to be properly guided by their teachers and parents every time they are going to use the computer.

Conclusion

Technology in education plays an important role in the study habits and skills of your child. But, need to make sure that you are going to be very careful in allowing them to use their computer and surf the internet for them to avoid discovering things that are not part of their studies. It is always important to let them used some of these technology in education as often as it is in order to prevent forgetting the basic way of studying.

10. EVALUATION IN DIGITAL WORLD

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Abstract

This paper gives an overview of the evaluation in digital world. Digital world means inter connected through digital devices, media or we can say digital marketing services that are available to everyone 24/7. The evaluations represent a broad spectrum of online options, from programs that provide online courses to Web sites that feature education resources. The main purpose of the online evaluation is to improve effectiveness in the online environment. The evaluation of online involves many of the day today life activities and applied to old and new processes more directly based on the online environment.

Keywords*: Evaluation, Digital, Learning, Spectrum, Internet, Online, Education, Environment.*

Introduction

The goal of online evaluation program is to make data entry accurate, simple and efficient. Designed to reduce data entry burdens to staff and sub coordinator, this system encourages timely uploading of the data, immediate report

for checking entries and ultimately meeting standards of data quality. Online evaluations have lower return rates than paper.

Online Interview

An online interview is an online research method conducted using computer-mediated communication (CMC), such as instant messaging, email, or video. Online interviews require different ethical considerations, sampling and rapport than practices found in traditional face-to-face (F2F) interviews. Online interviews are separated into synchronous online interviews, for example via online chat which happen in 'real time' online and asynchronous online interviews, for example via email conducted in non-real time. Some authors discuss online interviews in relation to online focus groups whereas others look at online interviews as separate research methods.

Methodologies

Online Interviews can utilize a selection of formats and employ varying means of computer-mediated communication (CMC). There are various methods are used for online interviews. They are synchronous, asynchronous, structured, semi-structured, unstructured.

Ethical Considerations of Online Evaluation

- Privacy
- Consent
- Withdrawal
- Netiquette

Methods of Online Evaluation

There are various methods are used for online evaluation. But in India the basic method is using OMR sheets. Optical mark recognition (OMR) is the scanning of paper to detect the presence or absence of a mark in a predetermined position. Optical mark recognition has evolved from several other technologies. In the early 19th century and 20th century patents were given for machines that would aid the blind.

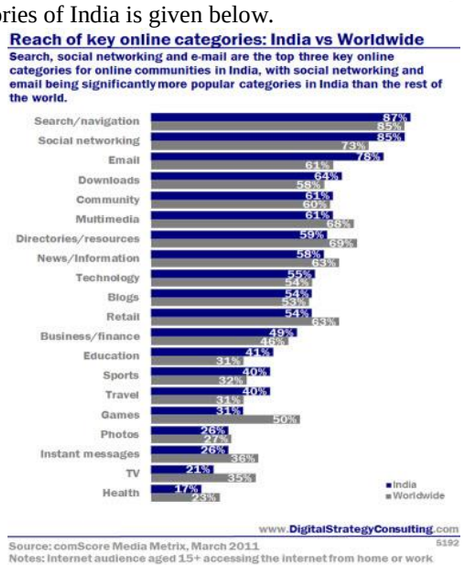
OMR is now used as an input device for data entry. Two early forms of OMR are paper tape and punch cards which use actual holes punched into the medium instead of pencil filled circles on the medium. Paper tape was used as early as 1857 as an input device for telegraph.[10] Punch cards were created in 1890 and were used as input devices for computers. The use of punch cards declined greatly in the early 1970s with the introduction of personal computers. With modern OMR, where the presence of a pencil filled in bubble is recognized, the recognition is done via an optical scanner.

Disadvantages

There are also some disadvantages and limitations to OMR. If the user wants to gather large amounts of text, then OMR complicates the data collection. There is also the possibility of missing data in the scanning process, and incorrectly or unnumbered pages can lead to their being scanned in the wrong order. Also, unless safeguards are in place, a page could be rescanned, providing duplicate data and skewing the data.

Online Evaluation in India

As India becomes more digitally connected, this special edition of Digital Intelligence shows the way India are being online, and on mobile. It's estimated as many as 121 million Indians are logged onto the internet. So online evaluation might be a best process when compare to our older evaluation methods. Because 3 hours - Average time an Indian spends on Internet as on March 2011.At present India is the second biggest country in terms of internet users in the world, with a highly social and mobile audience. The reach of key online categories of India is given below.



Online Evaluations – Limitations:

In an ideal evaluation system, users make it a habit to upload date in a timely manner, preferably immediately after data collection. The user would need to be able to access the internet at a speed that allows for uploading data prior to timing out which is not feasible in some areas (rural settings or Indian reservations) where programs are limited by Internet & computer capacity. If immediate uploading is not feasible, the PN collecting data must remember to upload data when back in an area that has sufficient computer & Internet access. Another limitation of many online data entry system is that only one staff member can update the database at a time. This requires that project staff communicate clearly about when the database is being used so that others may avoid that time. The program requires submitting data at least every five minutes to prevent the program from timeout. While this feature reduces the likelihood of hacking into the database, staff may have difficulty completing entry within this time window. In addition, if the submit data button is not clicked about every 5 minutes, the data record may be incomplete when the screen blanks out. A final limitation is the report generation feature. A feature complication is that when data set fields are changed by adding new fields or data,

SPSS, Excel or other databases also must be modified to much the File-maker-pro database.

Conclusion

The greatest benefits are that current, up-to-date, data summaries are immediately available to the principal investigator and each of the partner program directors 24hours a day, 7 days a week. Information uploaded once should not be lost and errors can be corrected in one master database and linked to the respective report rather than needing to be updated in multiple datasets. An omission or mistake has been made in an online entry, it can easily be edited, it is not necessary to create an entirely and new entry. The evaluations online, eliminate the need to print out thousands of paper surveys. Additionally, reduces waste and storage of cartons of documents. Reports are available almost immediately. Online Evaluation can be conducted where candidate can appear for it from remote areas with web camera surveillance technique. So hundreds or thousands of persons can appear for it from various locations. Online evaluation is ecological, convenient and security. Since India is the second biggest country in terms of internet users in the world, then India will be the advanced country for using online evaluation in future beyond all the abundance scope.

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11. AN ASSESSMENT TOOL: GOOGLE FORMS

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Abstract

This paper describes in detail about Google Forms and its features. It also highlights the methods and strategies in which Google Forms can be integrated with the educational assessment and evaluation. The paper also describes the ways in which successful incorporation of the Google Forms can be done. It also emphasizes the features of Google Forms and how these features can be used effectively

Introduction

The term **assessment**, in education, refers to the extensive array of methods or tools that educators use to evaluate, measure, and document the academic readiness, learning progress, skill acquisition, or educational needs of students. According to Palombi & Banta (1999), Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving learning and development. It is a broader term than *measurement*, which means applying a set of rules (some score scale) to an attribute of something or someone to obtain quantitative information about it (a score or number of some kind). Google forms is a way to incorporate e - learning techniques in the assessment processes of 21st century. According to Clemson Computer and Information Technology, Google Forms is a tool that is part of Google Drive for creating surveys, tests, or web input forms. Google forms allows anyone to create an easy to use web form, tie it to a spreadsheet where you can track results and post it on the web without having to know programming.

Assessment

Assessment is a participatory, iterative process that provides data/information you need on your students' learning, engages you and others in analysing and using this data/information to confirm and improve teaching and learning, produces evidence that students are learning the outcomes you intended, guides you in making educational and institutional improvements, evaluates whether changes made improve/impact student learning, and documents the learning and your efforts. University of Oregon, Teaching Effectiveness Program states "We define assessment as follows: Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process

culminates when assessment results are used to improve subsequent learning."

Further, there is another lens through which we can view Assessment i.e. assessment of, for and as learning. The purpose of this kind of assessment is usually SUMMATIVE and is mostly done at the end of a task, unit of work etc. Assessment *for* Learning happens during the learning, often more than once, rather than at the end. Students understand exactly what they are to learn, what is expected of them and are given feedback and advice on how to improve their work. In Assessment *for* Learning, teachers use assessment as an investigable tool to find out as much as they can about what their students know and can do, and what confusions, preconceptions, or gaps they might have. Again Assessment as Learning has been reiterated by Canadian Protocol for Collaboration in Education. It states that through this process students are able to learn about themselves as learners and become aware of how they learn – become metacognitive (knowledge of one's own thought processes). Students reflect on their work on a regular basis, usually through self and peer assessment and decide (often with the help of the teacher, particularly in the early stages) what their next learning will be. It enhances their metacognitive abilities.

Evaluation

Evaluation goes one step further. Evaluation means using assessment information to make judgments about the worth of something. It involves value judgements within itself. Educational evaluation is the process of obtaining information and using it to come to some conclusions which will be used to take decisions. "Educational evaluation is a systematic and ongoing process which includes: Researching and collecting information, from different sources, about the learning process, the content, the methods, the context, the outcomes of an educational activity, the organization and analysis of that information, the establishment of certain criteria (evaluation criteria), the discernment and judgement of the analyzed information (according to the set evaluation criteria and at the light of the educational objectives), drawing conclusions and recommendations which allow the re-orientation and eventual improvement of the educational activity" (Giovanni Iafrancesco, 2001. P 6)

Google Forms

Forms are among the internet's most versatile tools. Whether we need a contact form or a checkout page, a survey or a student directory, a form is all we need to easily gather that information. With Google Forms, it only takes a few minutes to make one for free. Google Forms along with Docs, Sheets, and Slides—is part of Google's online apps suite of tools that can be used in diverse ways. Google forms is a free Google application that allows you to quickly create and distribute a form to gather information. Form responses are saved in a Google spreadsheet in Google drive. The author will be focusing more on how Google Forms will be integrated with assessment and evaluation of, for and as learning. It is a web 2.0 technology which can be well blended with the teaching learning processes of 21st century. It provides an extensive range of interactive and analytical features that can be very effectively and efficiently used by the teachers and students. It has feature that enables the teachers to create multi-choice, short answer, long answer questions and also provide options to add check boxes, dropdown menus etc. It provides predesigned templates to ease up the task of working on the platform. Google Forms provide immense number of features to create new forms, edit already prepared forms, add questions, edit questions, grade quizzes etc. It also provides options for formatting the text, colors, font styles. Appropriately designed google forms can do miracles in the field of educational assessment and evaluation.

Operation

Auto graded quizzes: Teachers can create close ended quizzes using all the features of Google Forms. An astonishing feature has been provided by Google Forms that auto grades the questions and saves it in the spreadsheet format in the Google Drives**.** The 'create quiz' option has to be selected and the gear (settings) button has to be clicked. The "Quizzes" tab is to be selected and "Make this a quiz" is to be turned on. We have some options in that window. Then, one needs to go through the questions and the correct answer is to be selected.

Quizzes with Flubaroo — Flubaroo is an add-on to Google Sheets that can create a detailed grading summary with student results from an assessment. When students complete a quiz/assessment in Google Forms, the "Responses" tab is to be clicked and the little green Sheets button is to be clicked. This will create a spreadsheet of results from the quiz/assessment. It creates a summary that shows average student grade, individual student grades (plus which questions each student got right or wrong), questions students struggled on, and more.

Exit ticket/bell ringer —The students are made to answer questions at the beginning or end of class with a Google Form. We need to add images, links, videos and more to the form to make it a richer multimedia experience. Then gather all of the student responses in a spreadsheet.

Quick grade log — To quickly mark a grade for simple assignments, a Google Form with every student's name can be created by the teacher.

Flipped classroom assessment — The flipped classroom comes in many different shapes and sizes, but many teachers have students watch a video and then answer some comprehension questions afterward. This is easily done in Google Forms. For example, a form can be created with a YouTube video (created by you or found on YouTube) and questions. This will facilitate the students with an enriched environment.

Rubrics — A rubric can be created in a Google Form to make an easy place for teachers to assign grades and provide feedback to students. When we are done grading and writing feedback, we would use the Autocrat add-on to turn all that feedback into a document. The document can be shared that with students and parents also.

Conclusion

The present world is a digital world and we the teachers are a community of Digital Immigrants. To handle the teaching learning process in a very efficient manner and to enable the Digital Natives to develop fullest to their potentials, we need to incorporate technology in the assessment and evaluation. We have to learn, unlearn and relearn the technologies of the 21st century in order to be competent, resourceful and efficient teachers.

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12. EVALUATION USING E-PORTFOLIO IN EDUCATION TECHNOLOGY

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Abstract

Continuous developments in education technologies are accompanied by diversity of methods and applications in education. The process starting with computer-assisted learning is now in a different dimension via increasing internet possibilities. Another important factor in this issue is that learner centered approach has been accepted widely and become widespread. Transition from portfolio to e-portfolio is one of the current examples to be given about changing process in education technology. The approach which places learners and assignments at the centre has turned into a learner work file. Portfolio is a big assignment and study collection where a learner collects his studies. The use of e-portfolio has replaced portfolio as information and communication technologies have become main components in education. The last few years have seen an enormous growth of interest in e-portfolios and the benefits they can bring to learner as well as educators. In this paper, we will examine what e-portfolios are, the range of ways they can be used, the tools used to create e-portfolio, how educators/learners are benefited and ways to realize these benefits, now and in the future.

Key words: Portfolio, e-portfolio, education technologies, information and communication technologies, educator.

Introduction

The portfolio which is defined as a large collection of the student homework and studies has been replaced with e-portfolio by the development of information and communication Technologies (ICT). An e-portfolio is an electronic collection of evidence that shows your learning journey over time. Portfolios can relate to specific academic fields or your lifelong learning. Evidence may include writing samples, photos, videos, and research projects, observations by mentors and peers, and/or reflective thinking. The key aspect of an e-portfolio is your reflection on the evidence. An e-portfolio is not a specific software package, but more a combination of process (a series of activities) and product (the end result of the e-Portfolio process). E-portfolio is a valuable learning and assessment tool. An e-portfolio is a digitized collection of artifacts including demonstrations, resources and accomplishment that represent an individual, group, or institution. This collection can be comprised of text-based, graphics, or multimedia elements archived on a website or on other electronic media such as CD-ROM or DVD. An e-portfolio is more than a simple collection, it can also serve as administrative tool to manage and organize work created with different applications and to control that work. E-Portfolio encourages personal reflection and often involve the exchange of ideas and feedback.

Benefits of using E-Portfolio in Assessment

- Tracking and identifying skills, knowledge and evidence gaps that require further work
- Storing (and/or sign-posting) all the evidence in one place, which makes for ease of access, and reduces the chances of loss or damage
- The capability to access the e-portfolio from any networked computer, so the user has no need to carry anything around
- Sharing the portfolio on a named basis, which enables learners to allow tutors and assessors to review their evidence without the need to photocopy documents, thus saving time and ensuring confidentiality
- Transferring e-portfolio content to other systems and organizations
- Supporting accessibility at all levels, from reducing the amount of paperwork or easing the development of an audit trail, to enabling the preferences and needs of all users
- Supporting individual and group-based learning and assessment
- Supporting multiple languages and cultures

- Scalability (the capacity to deal efficiently with higher volumes of evidence and learners)
- The potential to include new evidence types, such as video, that would not be possible without an electronically-based portfolio.

Learners involved in E-Portfolio

- Learner can take increasing responsibility for their own learning by recording and reflecting on their learning in an e-portfolio.
- Learner can carry their e-portfolio throughout their learning journey and use it to record, assess, evaluate and reflect at any time.
- Build learners' personal and academic identities as they complete complex projects and reflect on their capabilities and progress.
- Facilitate the integration of learning as learners connect learning across courses and time.
- Be focused on developing self-assessment abilities in which students judge the quality of work using the same criteria that experts used.
- Help learners to plan their own academic pathways as they come to understand what they know and are able to do and what they still need to learn.
- E-portfolio processes and tools for organization and communication support the learning outcomes of students with a wide range of abilities. Learners also develop ICT skills through using these tools, thus achieving curriculum outcomes through purposeful activity.
- The combination of software tools that allow learners space for experimentation and the expertise of teachers who can scaffold further learning, has the potential to develop creativity. But there is a potential tension between facilitating creativity and designing supportive structures for students to enter information.
- There are some learners in all age ranges who find that software that includes structured processes and organisational tools (such as templates for planning, calendars and goal-setting exercises) scaffolds their learning until they are confident enough to progress to working independently. Some value seeing e-portfolio exemplars before embarking on their own.
- Tools that support the important learning process of feedback from teachers and peers and collaboration within class groups and across institutions are much appreciated by learners and also teachers.
- There is a great potential to make connections between e-portfolio processes such as storing, reflecting and publishing and learners use of emerging social software tools used outside formal education.

Role of Teachers in E-Portfolio

Teachers must ensure the underlying pedagogy of establishing students as life-long learners with the skills to self-monitor and evaluate drives how e-portfolios are used. The technology or device used does not replace the learning. The technology is a vehicle to accomplish effective learning outcomes. Teachers are responsible for designing and assessing the assignments that may be included in students' e-portfolios. Considered from a learning-centered perspective, assignments define outcomes through what we ask students to do, foster outcomes during the process of being completed, provide opportunities for formative and/or summative assessment and generate data on student learning that can be analyzed for ways to improve student learning. The teacher guiding the portfolio process helps determine the purpose of the final portfolio. The portfolio may be used to show growth over time, it may be used to promote a student's abilities, or it may be used to evaluate a student's learning within a specific course. Teachers/Educators have many roles in the assessment of e-portfolio. Educators/teachers will

- They will be able to empathize with students as they create, find or request their own evidence.
- They will develop an appreciation for the challenges that are experienced while writing a reflective statement that identifies learning.
- They will have the opportunity to explore more fully who they are and what they know and can do.
- They will assess strengths and interests which allows for exploration of career options.
- They will refresh their skills in documenting lifelong learning experiences
- They will have a record of personal learning with documents that prove formal and informal learning.
- They will be able to demonstrate professional growth and show a commitment to continued learning.
- They will have an organized collection of evidence that can be used as a job search tool if needed.
- They will have a tool to showcase skills and knowledge to their employers when seeking a new position or a promotion.
- They will be able to identify strengths and/or weaknesses to help with future professional development decisions.
- They will be able to assess strengths and make more informed decisions on career options.
- They will have clear documentation to assist with Prior Learning Assessment and be able to link learning to learning outcomes.
- They may even have the evidence needed for PLA credits when pursuing continued education.

Is E-Portfolio Methodology or Process?

E-Portfolio can be created by many methods using different tools and there is step by step process in building e-

portfolio. Here I have included method using web tools to create e-portfolio. Here some of the best web tools to help you create e-portfolios:

1. **Wordpress**

Wordpress uses a blog format that includes a commenting feature. While creating an e-portfolio, students could also learn how to use a blog with this tool. WordPress offers a 10-step tutorial, examples, templates and 200 MB of storage.

2**. Googlesite**

Google Sites provides a free application for creating your own web site. It is also an effective platform for creating and hosting your e-portfolios.

3**. Voicethread**

It allows users to create multimedia slideshows using images, documents, and videos. Other users can then comment using text, audio, or video.

4. **Googlio**

Googlio is a good option for students who already have Google and gmail accounts. Google provides step-by-step instructions and offers ready-made templates. This tool is easy to use and supports creative presentation of artifacts, so students can easily share their e-portfolios.

5. **Prezi**

Prezi is cloud- based presentation software. The product employs a zooming user interface which allows users to zoom in and out of their presentation media and allows users to display and navigate through information within a 2.5D or parallel 3Dspace on the z-axis. Here e-portfolio is shared by teachers and students.E-portfolio teacher can use it every day.

The Process to create E-Portfolio on Prezi

Prezi steps into 3 Phases: 1. Creation of prezi 2.What are the form of information we used, 3. Feedback and comment

PHASE 1: Creation of prezi

- Go to prezi.com and create an account for your own prezi page
- And the go to your prezi page and log in using the email and password associated with your prezi.com account
- Click the "New prezi" button in the upper left corner of the page.
- Enter a title and description for your New prezi
- Automatically go to the editor

PHASE 2: What are the forms of information which we used such as

- Text
- Video
- Audio
- Image
- Documents
- Presentations

PHASE 3: Feedback and comments

Eg: For teacher's e-portfolio, teachers change the setting from public to privacy with their students. So that teacher gets feedback and comments only from their students which they will keep recording it for their professional development.

Advantages of E-Portfolio in Education Process

- **E-Portfolio Strengthen the Active Learning**: Learner-centered education and active learning occur when the students take their own learning responsibility and manage their own learning. It also helps student's goals relating to learning and examine these goals regularly and takes their own responsibility.
- **E-Portfolio motivates the Students:** Knowing to present the studies they have done to the audience, students create their studies more carefully and thoughtfully. At the same time, accessing the previous studies, they can take steps more consciously evaluating themselves.
- **E-Portfolio is Feedback Tool:** The efficiency of learning goals forms a feedback system which allows the effectiveness of learning strategies and the clarity of information presentation. This gives feedback not only to students but also to teachers, school, parents, and other people allowing the information exchange between them.
- **E-Portfolio is Evaluation Tool:** They form a very effective method which reveals the students'studies and learning process can be measured in a determined way from the beginning to the end according to the target behaviors. Evaluation becomes a part of learning. They also allow the research elements, education and guidance activities, students'studies and products and at the same time. Studies done outside the education system to be evaluated more integrated and understandable.
- **E-portfolio allow the Students Studies to be Shared:** The dynamic nature of internet pages and easily sharing feature of electronic media enable the student's studies to be shared with a wide audience in a meaningful way. Information and material sharing between the students & teacher who have done the similar studies will remove the workload and unnecessary repetition. It improves students'responsibility and autonomy sense and is a better way of self-assessment, self-expression, monitoring and updating changes. It also allows the students to review and renew his/her every information and skill accumulation during lifetime.
- **E-Portfolio can store a Wide Variety of Data:** E-portfolio have a very flexible structure. Students can create and store their own oral and written work, image files, artistic work, and animations via them. This expands the student point of view as a learner and makes the learning more exciting. They are stored in a way that students, teachers and parents can easily access every

time. Furthermore, they can be accessed from all over the world and shared by everybody via internet.

Conclusion

In the digital world electronic portfolio (ePortfolio) development within teacher education and evaluation have largely ignored a multidimensional lens toward self-assessment. This paper discussed as a promising framework for both teacher and student development using e-portfolio. E-Portfolio are discussed with many tools which have the special features and advantages in education technology. E-portfolio empowers students and helps them see the path of their learning experience. This is how they can grow to appreciate and manage their achievements. Moreover, by introducing digital portfolios to an education, educators can foster digital skills to make out of their learners as true digital citizens.

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13. EVALUATION OF DIGITAL WORK

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Introduction:

A scholarly work that represents humanities evidence in a digital form is the result of a series of decisions, the first of which is the choice of what to represent. For example, a digital representation of a manuscript is first a choice of what manuscript to digitize and then what contextual materials to digitize. These decisions are similar to those any editor or translator makes when choosing what to represent in a new edition or translation. A content expert should be able to ask about the choices made and discuss these with a candidate.

Once choices are made about the content then a digital scholar has to make choices about how the materials are digitized and to what digital format. There are guidelines, best practices and standards for the digitization of materials to ensure their long term access, like the Text Encoding Initiative guidelines or the Getty Data Standards and Guidelines. These are rarely easy to apply to particular evidence so evaluators should look for a discussion of what guidelines were adapted, how they were adapted, and why they were chosen. Absence of such a discussion can be a sign that the candidate does not know of the practices in the field and therefore has not made scholarly choices.

In many cases the materials may be digitized to an archival standard, but be made available online at a lower resolution to facilitate access. Again, there candidate can be expected to explain such implementation decisions.

As mentioned in the previous point there are guidelines for encoding scholarly electronic texts from drama to prose. The TEI is a consortium that maintains and updates extensive encoding guidelines that are really documentation of the collective wisdom of expert panels in computing and the target genre. For this reason, candidates encoding electronic texts should know about these guidelines and have reasons for not following them if they choose others. The point is that evaluators should check that candidates know the literature about the scholarly decisions they are making, especially the decisions about how to encode their digital representations. These decisions are a form of editorial interpretation that we can expect to be informed though we should not enforce blind adherence to standards. What matters is that the candidate can provide a scholarly explanation for their decisions that is informed by the traditions of digital scholarship it participates in.

Generally speaking, projects should choose open and well documented standards (as opposed to proprietary standards like the WordPerfect file format) if they want their materials to be useful to scholars in the future. Electronic scholarly resources that use proprietary formats doom their work to be inaccessible to scholars once that format is superseded. Exceptions to this are project exploring interactivity which often calls for an authoring environment like Flash that can facilitate innovative interfaces. Such projects will typically keep the materials in open standard formats and use Flash to provide the interactive interface.

One of the promises of digital work is that it can provide rich supplements of commentary, multimedia enhancement, and annotations to provide readers with appropriate historical, literary, and philosophical context. An electronic edition can have high resolution manuscript pages or video of associated performances. A digital work can have multiple interfaces for different audiences from students to researchers. Evaluators should ask about how the potential of the medium has been exploited. Has the work taken advantage of the multimedia possibilities? If an evaluator can imagine a useful enrichment they should ask the candidate whether they considered adding such materials.

Enrichment

Enrichment can take many forms and can raise interesting copyright problems. Often video of dramatic performances are not available because of copyright considerations. Museums and archives can ask for prohibitive license fees for reproduction rights which is why evaluators shouldn't expect it to be easy to enrich a project with resources, but again, a scholarly project can be expected to have made informed decisions as to what resources they

can include. Where projects have negotiated rights evaluators should recognize the decisions and the work of such negotiations.

In some cases, enrichment can take the form of significant new scholarship organized as interpretative commentary or essay trajectories through the material. Some projects like NINES actually provide tools for digital exhibit curation so that others can create and share new annotated itineraries through the materials mounted by others. Such interpretative curation is itself scholarly work that can be evaluated as a form of exhibit or essay. The point is that annotation and interpretation takes place in the sphere of digital scholarship in ways that are different from the print world where interpretation often takes the form of an article or further book. Evaluators should ask about the depth of annotation and the logic of such apparatus.

Evaluating

In addition to evaluating the decisions made about the representation, encoding and enrichment of evidence, evaluators can ask about the technical design of digital projects. There are better and worse ways to implement a project so that it can be maintained over time by different programmers. A scholarly resource should be designed and documented in a way that allows it to be maintained easily over the life of the project. While a professional programmer with experience with digital humanities projects can advise evaluators about technical design there are some simple questions any evaluator can ask like, "How can new materials be added?"; "Is there documentation for the technical set up that would let another programmer fix a bug?"; and "Were open source tools used that are common for such projects?"

It should be noted that pedagogical works are often technically developed differently than scholarly resources, but evaluators can still ask about how they were developed and whether they were developed so as to be easily adapted and maintained.

The first generations of digital scholarly works were typically developed by teams of content experts and programmers (often students.) These project rarely considered interface design until the evidence was assembled, digitized, encoded and mounted for access. Interface was considered window dressing for serious projects that might be considered successful even if the only users where the content experts themselves. Now best practices in web development suggest that needs analysis, user modeling, interface design and usability testing should be woven into large scale development projects. Evaluators should therefore ask about anticipated users and how the developers imagined their work being used. Did the development team conduct design experiments? Do they know who their users are and how do they know how their work will be used? Were usability experts brought in to consult or did the team think about interface design systematically? The advantage to a candidate of engaging in design early on is that it can result in publishable results that document the thinking behind a project even where it may be years before all the materials are gathered.

It should be noted that interface design is difficult to do when developing innovative works for which there isn't an existing self-identified and expert audience. Scholarly projects are often digitizing evidence for unanticipated research uses and should, for that reason, try to keep the data in formats that can be reused whatever the initial interface. There is a tension in scholarly digital work between a) building things to survive and be used (even if only with expertise) by future researchers and b) developing works that can be immediately accessible to scholars without computing skills. It is rare that a project has the funding to both digitize to scholarly standards and develop engaging interfaces that novices find easy. Evaluators should look therefore for plans for long term testing and iterative improvement that is facilitated by a flexible information architecture that can be adapted over time. A project presented by someone coming up for tenure might have either a well-documented and encoded digital collection of texts or a well-documented interface design process, but probably not both. Evaluators should encourage digital work that has a trajectory that includes both scholarly digital content and interface design, but not expect such a trajectory to be complete if the scope is ambitious. Evaluation is, after all, often a matter of assessing scholarly promise so evaluators should ask about the promise of ambitious projects and look for signs that there is real opportunities for further development.

Conclusion

Finally, it should be said that interface design is itself a form of digital rhetorical work that should be encouraged. Design can be done following and innovating on practices of asking questions and imagining potential. Design, while its own discipline, is something we all have to do when developing digital works. Unlike books where the graphic and typographic design is left to some poorly paid freelancer paid for by the publisher after the book is written, in digital work it is all design from the first choices of what to digitize. This is especially the case with work that experiments with form where the candidate is experimenting with novel designs for information. In the humanities the digital work has forced us to engage with other disciplines from software engineering, informatics to interface design as we ask questions about what can be represented. It is a sign of good practice when humanists work collaboratively with others with design expertise, not a sign that they didn't do anything. Evaluators should look expect candidates presenting digital work to have reflected on the engineering and design, even if they didn't do it, and evaluators should welcome the chance to have a colleague unfold the challenges of the medium.

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1. A FUTURE EDUCATIONAL MANAGEMENT IN THE DIGITAL WONDERLAND

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Abstract

Educational Management is a multiphase activity. It is a social process that is designed to ensure the co-operation, participation, intervention and involvement of others in the effective achievement of given or determined objectives. Educational Management has academic and administrative process in past and present. But the Future Educational Management will change in digitalization. It will create digital and comfort wonderland to the student, teacher, parents, Head of the institution and non-teaching staff. And at the same time, it creates (or) helps Eco-Friendly for environment development, digitization of society in National and International level.

Key Words: Educational Management, Digitalization, Wonderland, Digital Library.

Introduction

Management, being a social process, lays more emphasis on the interaction of people inside and outside the formal institution and people above and below one`s operational position. Although, some of the modification will be created in future digitalization of the world. It is not only happened in a particular field but also it will be happening all the fields like Education. Education is one of the greatest managements of the worlds. It plays a vital role in all the institutions. So, this documentary describing "A Future Educational Management in Digital Wonderland" in the institution management, head of institution, pupil, teachers and Parent teacher association etc.

Educational Management in Past and Present

Educational Management refers to the theory and practice of the Organization and administration of existing educational establishment and system. Educational Management is a comprehensive term used at different levels and types of application of management.

When Luther Gullick has given a catch words for the functions of management as POSDCORB,

P - Planning
O - Organizing
S - Staffing
D - Directing
Co- Co-ordinating
R - Reporting
B - Budgeting

In this way, planning, organizing, staffing, Directing, Co-ordinating, reporting, Budgeting etc., are the important elements of the process of management.

Educational Management is concerned with people. It is by the people, through the people and for the people. Managers have to provide Leadership to the people, so that, the stated objectives may be achieved. They allocate them, fix priorities, develop time schedules and apply their ideas in solving problems arising around them. It is for the purpose of achieving objectives of realizing a goal that the managers make use of people, ideas and resources.

The kind of management has not only followed past and present but also followed to Future Educational Management. But the Future Educational Management will be slightly different. Because, it will be inculcating the digitalization of ICT. For example, managements resource digitals (Physical, human and Financial), teaching learning process, Teaching Aids, etc.,

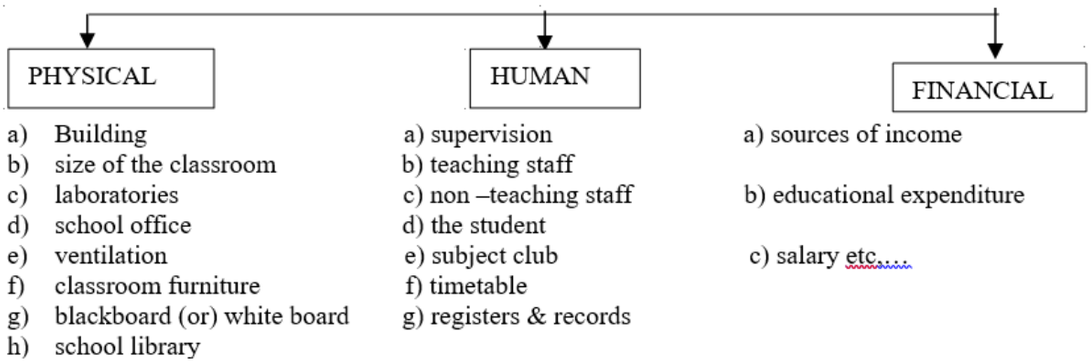
Educational Management in Future

Digital Education system is software and hardware integrated system, which will automate almost all the activities in the organization. It has been developed to overcome the problems faced by traditional education system. It is user friendly as well as very low lost solution. Along with school management, this system also focuses on effective and interactive teaching through digitalized 3D interactive multimedia slides even in multilingual standard. These are resources of Educational Management:

Classification of Resources in Educational Management

Through this way, the future Educational Management will be run successfully, Because of the involvement of digitalization.

The physical resources of Educational Management are same as in the present to future. But the future we used advanced level of all equipment like CCTV cameras, now the new creative is bullet light camera, it has covered 180 degrees of areas. The future school administration won't use paper registers and records. It wills use a registers and record only for ICT technology based. Electronic registers must record acquired both teacher and student own self register. For example, library record etc.,



The children won't take all books and notebooks for future school. Because future digitalization will change everything like children will carry iPod and some USB etc. It will not affect children writing skill. Digitalization will create advance level of iPod for own writing with use pen and pencil. So that it can improve child self-confidence and attention of school subjects. The library will be digitalized, in that all the books, all journals and magazines will be change a small size of USB and SD cards. Library will function small size room and we will easily gather many kinds of books.

Parent teacher association will gain the advance level and development. Parent s and teacher meeting will contact in video conference and also parent will not direct visit in the school. So that digitalization will create good relationship of teacher to parent, and parent to school institution.

Digital Educational Management will be developing financial management also. Financial Management will run disciplinary. It will develop cash transformation through online cash payment, mobile payment, etc., So we will control economical corruption.

Advantages of Digitalization in Educational Management

With highly innovative technological integrated tools, an organization can get the following advantages.

- ✓ Less paper work, time saving and saves forest.
- ✓ Commercial benefits to organization.
- ✓ Operated with less human resource and less effort.
- ✓ Automatic attendance of staff and students.
- ✓ Automatic timetable generation according to syllabus.
- ✓ Make and edit high quality audio visual lessons using readymade templates.
- ✓ Teach through interactive 3D world.
- ✓ Provide teaching progress information to complete the syllabus in time.
- ✓ Search and book an item through online from school library.
- ✓ Online practice and assignment facility.
- ✓ Cyber wallet facility for students and parents.
- ✓ Individual assessment of student
- ✓ No need of private tuition of student
- ✓ Create brilliant students.
- ✓ Maintain health card information.
- ✓ Easy to deploy and operate.
- ✓ It will help in admission process of the students, scheduling of class lectures, managing teachers as well as student's notes, fee submission process and all other activities.
- ✓ All the information will be available for the digital mechanic to the students, employees and parents inside as well as outside the school campus through Digital Management of Education.

Conclusion

"A Future Educational Management in the Digital Wonderland" Document have proved to be beneficial not only for the Organization, but also for teachers, students as well as parents. So this Digitalization new life style in the Wonderland of teachers, student and head of the institution, Non-teaching staff and parents.

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2. EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

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Abstract

Educational management deals with the formulating innovative teaching and learning methods in the field of education. In the present day situation all schools and colleges are being digitalized and it is very important to know the managing techniques and how to implement that. Let us see in detail about financial management in education which is an integral part of general educational management which embraces curriculum, staffing and time table.

Education in The Digital World

Today education has become digital, in the sense that technology is being used extensively in order to gain knowledge. Computer laptops and tablets are used by students and teachers for sharing of knowledge and facts. Now- a-days, information is easily available on internet by simply typing the query. With the help of digitalization, cross cultural communication is possible which leads to broadening a mind and a better understanding of each other's thought processes and cultures. It helps students to become more active about social issues with the help of social networking sites and other media. They learn about environmental hazards and how to protect it also, they learn about new laws and their rights and duties as citizens. We can say that without technology we won't be able to survive in today's world.

Meaning of Educational Management

The origin of the development of educational management as a field of study began in the United States in the early part of the twentieth century. Development in the United Kingdom came as late as the 1960's. Educational management, as the name implies, operates in educational organizations or institutions.

There is no single accepted definition of educational management as its development observed in several disciplines or fields like business, industry, political science, economics, administration and law. So while defining the meaning of the term educational management can be said that, "Educational management is a complex human enterprise in which different resources are brought together and made available to achieve and to accomplish the desire and expected goals or objectives.

It is being mainly a human endeavor should be properly planned without emphasizing the rigid application of mechanical and physical principles. It is fundamentally a social organization where inter human relationships must play a major role. For success of educational management, there must be adequate freedom and flexibility on the one hand and necessary discipline and decorum on the other hand in the educational institution.

Definition of Educational Management

School management, as a body of educational doctrine, comprises a number of principles and precepts relating primarily to the technique of classroom procedure and derived largely from the practice of successful teachers. The writers in this field have interpreted these principles and precepts in various ways, usually by reference to larger and more fundamental principles of psychology, sociology and ethics. —Paul Monore. "Theory and practice of the organization and administration of existing educational establishments and systems." —G. Terrypage and J.B. Thomas, to him management implies an orderly way of thinking. It describes in operational terms what is to be done, how it is to be done and how we know what we have done. Management is a method of operation and good management should result in an orderly integration of education and society. —Shelly Umana.

In the light of above discussion, it is clear to visualize that educational management is a comprehensive effort intended to achieve some specific educational objectives. It deals with the educational practices, whereas educational philosophy sets the goals, educational psychology explains the principles, educational administration tells how to achieve educational objectives and principles. It is the dynamic side of education.

It deals with educational institutions – right from the schools and colleges to the secretariat. It is concerned with both human and material resources which are essential. Because, the degree of success of the educational management of any educational programme depends upon the degree of co-ordination and organization of these resources.

Types of Educational Management

1. Human Resources

Human Resources of an educational institution comprise the entire staff, both the teaching and non- teaching – teachers, clerks, researchers and other elements such as students, parents, members of the community, members of the managing or governing body and departmental officials. Management of human resources is of vital importance at present and calls for selection, recruitment, appointment, hire, retention, development and motivation of the personnel to achieve the educational objectives.

The individuals involved in the process should be provided with adequate facilities for reaching the highest levels of achievement and for improving the professional growth to the maximum. So an educational institution or organization in order to be effective and efficient has to ensure that there is right type of people with the right skills, in the right place and at the right time for carrying out the various jobs and services.

For this human resource needs are to be identified. Proper selection and recruitment are to be made, demands and supply of services be properly matched and suitable forecasting be made about the future requirements. There are problems of working conditions, promotion prospects, appointment and transfer, motivation and security, career development and so on which have to be handled with sympathy, understanding, fellow feeling and co-operation on the one hand and proper sense of commitment and accountability and involvement on the other hand.

2. Physical and Material Resources

For every organization or institution, basic infrastructure in concrete terms is essential. Buildings, playgrounds, equipment's, furniture's, machineries and stationeries are required for various practical purposes. Libraries, laboratories, auditorium and so on are part and parcel of an educational institution for organizing different curricular and co-curricular programmes.

The modern age of science and technology has made it possible to equip the educational institution with various media and materials, electronic gadgets including radio, television computers, projectors of many kinds and traditional aids like illustrations, models, charts, maps etc. at reasonable prices.

Like human resources, there must be proper identification of physical resource needs, installation, maintenance and the most important thing is their proper utilization. But the material resources must be of right type with right specifications to be available in the right place and at the right time so that the educational goals can be realized without difficulty, duplication and wastage. It is also necessary that physical resources should have adequate flexibility, adoptability and stability for meeting the future needs and conditions.

3. Ideational Resources

The resources which are mostly based on ideas and ideals, heritage, image are the curriculum, methods of teaching, innovations and experiments. Like the individual, every organization has its own personality with integrity, its own culture and its own values which are unique and influential for the smooth functioning and effective management of the institutions for creating motivation and self- pride among individuals.

All these create feelings, belongingness, involvement and self-satisfaction among the personnel for working and implementing the programmes in educational institutions. At last it can be said educational management will be meaningful if there will be a great deal of co-ordination and inter relation among these three resources. The cause is that all these three resources are interdependent and immensely contribute to holistic development of every educational institution as a whole.

Hence educational management in broader perspective says about:

Setting directions, aims of objectives of educational organizations or institutions. Planning for progress of the programme Organizing available resources—People, time, material. Controlling the implementing process. Setting and improving organizational standards.

In the light of above discussion on the meaning of management in education it implies the practical measures to activate the system of work will be the best possible assistance or measures in achieving the goals or objectives in a wider extent bearing the best possible value to the students and the society in a grand scale.

Educational Technology

Educational technology is defined by the Association for Educational Communications and Technology as "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources".

Educational technology refers to the use of both physical hardware and educational theoretic. It encompasses several domains, including learning theory, computer-based training, online learning, and, where mobile technologies are used, m-learning. Accordingly, there are several discrete aspects to describing the intellectual and technical development of educational technology:

1. Educational technology as the theory and practice of educational approaches to learning
2. Educational technology as technological tools and media that assist in the communication of knowledge, and its development and exchange
3. Educational technology for learning management systems (LMS), such as tools for student and curriculum management, and education management information systems (EMIS)
4. Educational technology itself as an educational subject; such courses may be called "Computer Studies" or "Information and communications technology (ICT).

Virtual classroom

A virtual learning environment (VLE), also known as a learning platform, simulates a virtual classroom or meetings by simultaneously mixing several communication

technologies. For example, web conferencing software such as Go to Training, WebEx Training or Adobe Connect enables students and instructors to communicate with each other via webcam, microphone, and real-time chatting in a group setting. Participants can raise hands, answer polls or take tests. Students are able to whiteboard and screen cast when given rights by the instructor, who sets permission levels for text notes, microphone rights and mouse control.

A virtual classroom provides the opportunity for students to receive direct instruction from a qualified teacher in an interactive environment. Learners can have direct and immediate access to their instructor for instant feedback and direction. The virtual classroom provides a structured schedule of classes, which can be helpful for students who may find the freedom of asynchronous learning to be overwhelming. In addition, the virtual classroom provides a social learning environment that replicates the traditional "brick and mortar" classroom. Most virtual classroom applications provide a recording feature. Each class is recorded and stored on a server, which allows for instant playback of any class over the course of the school year. This can be extremely useful for students to retrieve missed material or review concepts for an upcoming exam. Parents and auditors have the conceptual ability to monitor any classroom to ensure that they are satisfied with the education the learner is receiving.

In higher education especially, a virtual learning environment (VLE) is sometimes combined with a management information system (MIS) to create a managed learning environment, in which all aspects of a course are handled through a consistent user interface throughout the institution. Physical universities and newer online-only colleges offer select academic degrees and certificate programs via the Internet. Some programs require students to attend some campus classes or orientations, but many are delivered completely online. Several universities offer online student support services, such as online advising and registration, e-counseling, online textbook purchases, student governments and student newspapers.

Augmented reality (AR) provides students and teachers the opportunity to create layers of digital information, that includes both virtual world and real world elements, to interact with in real time. There are already a variety of apps which offer a lot of variations and possibilities.

Media psychology involves the application of theories in psychology to media and is a growing specialty in learning and educational technology.

Teacher Training

Since technology is not the end goal of education, but rather a means by which it can be accomplished, educators must have a good grasp of the technology and its advantages and disadvantages. Teacher training aims for effective integration of classroom technology.

The evolving nature of technology may unsettle teachers, who may experience themselves as perpetual novices. Finding quality materials to support classroom objectives is often difficult. Random professional development days are inadequate.

According to Jenkins, "Rather than dealing with each technology in isolation, we would do better to take an ecological approach, thinking about the interrelationship among different communication technologies, the cultural communities that grow up around them, and the activities they support. Jenkins also suggested that the traditional school curriculum guided teachers to train students to be autonomous problem solvers. However, today's workers are increasingly asked to work in teams, drawing on different sets of expertise, and collaborating to solve problem. Learning styles and the methods of collecting information have evolved, and "students often feel locked out of the worlds described in their textbooks through the depersonalized and abstract prose used to describe them". These twenty-first century skills can be attained through the incorporation and engagement with technology. Changes in instruction and use of technology can also promote a higher level of learning among students with different types of intelligence.

Digital Library

A digital library is a special library with a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions. The digital content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system.

As we saw educational management includes setting up of the classes, equipping the teachers with new technological ideas and creating interest in the learners. Thus it is very essential for one to have a wide knowledge on these criteria in order to bring some revolution in the educational system through digitalization

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3. THE USE OF ICT IN EDUCATION FOR EDUCATIONAL MANAGEMENT

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Abstract

This paper aims to say about the more powerful effect of ICT in Education for Educational Management in the 21st Century. These technologies distinguish themselves by their rapid evolution and revolution, continuously changing the modes of engagement with them. A decade long infusion of computers, and more recently ICT, has demonstrated varying impacts on learning. In the current information age, educational institutions are expected to play a crucial role as the engine for knowledge generation and learning environment. In this regard ICT becomes the vital means to facilitate this task. ICT has become an essential part of our everyday life, accordingly this integration in school improvement is not only for the purpose of teaching and learning, but also for educational management use, it has become one of the most effective factors in the school improvement. ICT plays a vital role in improving the functional effectiveness of school system. In this unit we will be discussing about how ICT can help the school administrators improve various administrative tasks of schools.**Key-words**: ICT, administration and e-kiosks.

Introduction

ICT makes dynamic changes in society. It is influencing all aspects of life. The influences are felt more and more at schools. Because ICT provides both students and teachers with more opportunities in adapting learning, teaching and managing the individual needs, society is forcing schools to aptly respond to this innovation. It provides newer and more effective ways of mitigating some of the challenges being faced by the educational system of the country.

Role of ICT in School Administration

Information and Communication Technology (ICT) plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified that technology can be used right from student administration to various resource administration in an education institution

Table-1: The administrative information.

Sl.No.	Construct	Content categories
1	Student Administration	Usage of electronic media by students to apply for admissions
		Usage of computers for student registration / enrolment
		Availability of time table / class schedule in electronic form
		Usage of computers for maintenance of attendance of students
		Communication of academic details of students to their parents / guardians through e-media
		Usage of e-media for notifications regarding hostel accommodation
		Usage of e-media for notifications regarding transportation
2	Staff Administration	Usage of computers for recruitment and work allotment of staff in the institution
		Automation of attendance and leave management of staff members in the institution
		Usage of electronic media for performance appraisal
		Communication with staff using e-media
		e-circulars from the institution regarding official matters
		e-kiosks are available in the institution
3	General Administration	Usage of e-media for scheduling / allocation of halls for examinations
		Dissemination of information in the institution through e-kiosks
		Usage of e-media by students to apply for university examinations
		Usage of e-media for the processing and display of results of students
		Facility for students to make fee payments electronically

Record Keeping

School records are books, documents, files and CD ROM which embodies information on what is going on in school (e.g. scholastic, co-scholastic, non-scholastic activities and important events etc…) The school plant as well as other relevant information focusing on the growth and development of the school.

Some Important School Records

- Admission and Withdrawal Register
- Attendance Register
- Log Book
- Visitors Book
- Staff and Students' Personal Files
- Cumulative Record Folder
- Students' Report Sheet/Card
- Lesson Notes/Plan
- Scheme and Record of Work Book
- Staff Time Book and Movement Book
- Transfer and Leaving Certificate
- Library Records software.
- Stock Register
- Cash Register

Potential of ICT in Record Keeping

The usefulness of keeping school records with ICT is for the following reasons:

• Administrative Efficiency • Availability of Information • Easy Retrieval

- **Scheduling** Creating a schedule that will maximize instructional time, provide time to meet the needs of the school students, provide time for staff to meet and plan, organize various curricular and co-curricular activities of the school is very important for any school. Use of ICT helps to ensure that such scheduling happens smoothly.

  Some of the important activities of the school that need to be planned and scheduled are 1. School calendar 2. Teaching time table 3. Examination time table 4. Meetings including PTA. There are many software tools which help in such scheduling. Google calendar and FET time table software are two such commonly used tools.
- **Google Calendar:** Google Calendar is an internet-based time and task-management online application that allows for access to calendars via web browsers. Calendars can be created by schools and shared with parents, teachers, and students. Reminders of scheduled activities can be sent via email, text message, or pop-up messages within a web browser. Users are allowed to create as many calendars as they can. One can have a day, week, month and year wise of the calendar.
- **Some uses of it are given below:**

  1. It provides information on when classes begin, when school opens and closes
  2. It shows activities to be performed by the teachers and students.
  3. It assists in regulating the activities of students and staff of a particular school.
  4. It facilitates and enhances student interest and attention and prevents mental and physical strain.
- **FET:** FET is free software for automatically scheduling the timetable of a school or university. It uses a fast and efficient timetabling algorithm. It is free software, open source, licensed under GNU/AGPL. The term FET is the abbreviation of Free Evolutionary Timetabling at the beginning stage, as it is no longer evolutionary, the E in the middle can stand for anything the user prefers.

Tools and Technologies for Connecting Parents

- **E-mail:** Schools can create and send out a classroom newsletter to keep parents up to date by e-mail.
- **Website or Blog:** On the school website all information of the school such as contact information, expectations, school rules, about the school and the teachers, how to use the internet at home, etc. can be showed.
- **Online Survey:** Technology currently permits to get quick feedback from parents through online survey. Tools like Google form and survey monkey can be easily set up to get the information from parents and community members.
- **Virtual Learning Environments:** A virtual learning environment (VLE) is a software system designed to support teaching and learning in an educational setting. MOODLE is one of the popular open sources. You can review the features of MOODLE from its website at www.moodle.org
- **Media Sharing:** Currently it is possible to share various kinds of media online. Most popular one is sharing of videos through online video sharing sites like YouTube. Schools can use this to communicate with parents by sharing school programme related videos, videos for training parents on child rearing practices, helping students manage stress, time etc.
- **Social Networks.** It is possible to use social networks like Facebook, Twitter or MSN to communicate with parents. It is possible to make groups in Facebook and share information with the parents.
- **Online Groups and Forums:** Communicating with parents are made easy using forum and e-mail groups like Google groups and Yahoo groups.
- **SMS and Instant Messaging:** School can send SMS to the parents when the child is not at school. So the parents will immediately know if their child is playing truant. When the school has to send an urgent message for parents, school can send a collective SMS, warn parents or an individual SMS to contact a specific parent
- **Google chrome extensions and apps:** Many teachers deploying Chrome and Chrome Devices for Education want to force install or recommend Chrome web apps on their students' devices. However, given the thousands of Chrome web apps available, it's not always apparent which ones are the best for your class. Google has

created Chrome App Packs, which are groups of popular applications from the Chrome Web Store that are tailored to meet students' needs.

School Management Tools

Interactions sharing ideas and communications with teachers, parents, alumni and community members become the major part of school management. School management includes admission of students to various courses, assigning subjects and classes to teachers, maintaining records, communicating with parents, preparing various certificates, analysing various data etc. It should help all the stake holders in participating actively in decision-making process.

- **FeKara: FeKara**, is an all-round school admin software which cannot be treated as a free software completely. It covers modern school administration and management software option. It can be used to conduct exams, assignments, budgeting and internal messaging. Major drawback for FeKara is that it is meant for small schools only. Additional data storage and other features are available on payment basis. Website: http://fekara.com/
- **School Time:** School Time is also a similar type of school administration software. It is also can be upgraded to non-free software to get more benefits. Website: https://school-time.co/#
- **TS School:** TS School is the short form of Time Software School is a classic powerful tool that offers the basics for schools of all sizes. TS School is good for managing your workforce. TS School offers a student management system and an exam module. Again like the School Time and FeKara TS School also has a paid version which gives more features. Website: http://www.ts-school.com/
- **Fedena:** Fedena or project Fedena is open-source school administration software that largely focuses on handling records. It is based on Ruby on Rails. It was initially developed by a team of developers at Foradian Technologies. The project was made open source by Foradian, and is now maintained by the open source community. Website: http://www.projectfedena.org/
- **Ascend SMS:** Ascend SMS is entirely free full-program school administration software made for Catholic and Independent schools. Ascend SMS offers a complete package. Even though Ascend SMS is free for many schools, to avail that facility school has to be listed in their system. Website: http://www.ascendsms.com/
- **School Tool:** School Tool is cloud-based open-source school administration software made for schools in the developing world. It provides educators grade books, skill assessment documents, class attendance sheets, and daily participation journals along with organization features including applications like Google Calendar, and a great report card generator.
- **Open Admin for Schools:** Open Admin for Schools is once again open source. It offers software features like attendance, reports, management system. Website: http://richtech.ca/openadmin/index.html .

Conclusion

In pursuit of excellence, the school mission is to educate, guide and challenge all students to develop lifelong learning skills necessary to successfully contribute and compete in a rapidly changing global community. Principals and program leaders have sufficient technology available to support curriculum, instruction and assessment. Schools of the future must be open and flexible, focusing on learning. New communication should promote new collaborations and a higher level of cooperation and creative problem-solving. Educators must be supported in their use of new technologies for learning and also in their use of technology for professional development and collaboration. Learners (students, educators, parents, etc.) must be able to use technology to achieve new levels of learning and to acquire new information skills and abilities.

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4. AN OVERLOOK ON EDUCATIONAL MANAGEMENT IN SCHOOLS WITH DIGITAL ASPECTS

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Abstract

This paper tells about a clear idea for educational management in schools emerging with digital technologies. In 21st century, innovation and technology in higher education has no exception. Education management using digital infrastructures as a common aspect in this digital world. Education management can be categorized by three main resources. These resources are ideally linked with Digital aspects, which provide immense prospects to broaden the knowledge horizon of those who have a flair for learning and teaching. These can be managed efficiently irrespective of co-ordination and inter relation among these three resources. Use of digital gadgets in imparting educational management are reviewed and enhanced. Finally, this study outlines the content of Education Management on schools to improve the e-learning interactive methods and the results of educational process as well as to increase the disabled access to education.

Keywords: Education management, digital aspects, resources, institutions. E-learning.

Introduction

Educational management is both a field of academic study and a collective group of professionals that includes principals, teachers and other education professionals. Educational management, also sometimes known as educational administration, is commonly associated with elementary and secondary schools as well as institutes of higher learning like colleges and universities. Those working in educational management might act as policy-makers, researchers, or consultants to help evaluate and develop ways to enrich and enhance the educational system at all levels.

Purpose of Study

The study deals with educational institutions – right from the schools and colleges to the secretariat. It is concerned with both human and material resources which are essential. Because the degree of success of the educational management of any educational programme depends upon the degree of co-ordination and organisation of these resources.

Types of Educational Management

1. Human Resources

Human Resources of an educational institution comprise the entire staff, both the teaching and non- teaching – teachers, clerks, researchers and other elements such as students, parents, members of the community, members of the managing or governing body and departmental officials. Management of human resources is of vital importance at present and calls for selection, recruitment, appointment, hire, retention, development and motivation of the personnel to achieve the educational objectives. The individuals involved in the process should be provided with adequate facilities for reaching the highest levels of achievement and for improving the professional growth to the maximum. So an educational institution or organisation in order to be effective and efficient has to ensure that there is right type of people with the right skills, in the right place and at the right time for carrying out the various jobs and services.

2. Physical and Material Resources

For every organisation or institution, basic infrastructure in concrete terms is essential. Buildings, playgrounds, equipment's, furniture's, machineries and stationeries are required for various practical purposes. Libraries, laboratories, auditorium and so on are part and parcel of an educational institution for organizing different curricular and co-curricular programmes. The modern age of science and technology has made it possible to equip the educational institution with various media and materials, electronic gadgets including radio, television, computers, internet, projectors of many kinds and traditional aids like illustrations, models, charts, maps etc. at reasonable prices.

3. Ideational Resources

The resources which are mostly based on ideas and ideals, heritage, image are the curriculum, methods of teaching, innovations and experiments. Like the individual, every organization has its own personality with integrity, its own culture and its own values which are unique and influential for the smooth functioning and effective management of the institutions for creating motivation and self- pride among individuals.

All these create feelings, belongingness, involvement and self-satisfaction among the personnel for working and implementing the programmes in educational institutions. At last it can be said educational management will be meaningful if there will be a great deal of co-ordination and inter relation among these three resources. The cause is that all these three resources are interdependent and immensely contribute to holistic development of every educational institution as a whole

Research methodology

The study used the qualitative methodology. It was concerned with how school heads interpreted their roles in school administration and management. The objective is to gain a perspective and understanding of the education system and intervene through various developmental programs to enhance its quality. The broad objectives of the Management Development Program were to:

1. Build managerial skills to enable staffs of the department to respond proactively to the environment both at the functional and unit levels to achieve the goals of the department
2. Strengthen individual and organizational effectiveness by building managerial competence to achieve the goals of the department including quality universal education
3. To help staffs to look at the education sector from a managerial perspective

Institutions imparting management education need to influence new technologies and explore means for effective management of knowledge resources and intellectual capital. The advancements in technology have led to effective innovations in design and delivery of management courses. The delivery of management-related course content could be in any of the following modes:

1. A blend of face-to-face and web-based course delivery
2. Interactive course delivery and availability of course materials on the web
3. Learning content is available on the website / portal, but scope for interaction is very minimal.

In a constantly changing environment and enormous global challenges, the learners of the future need to become increasingly adaptive and innovative. In this perspective, management education and training need to be appropriately managed. This considers what needs to be taught to future learners, and how they should learn. These aspects necessitate changes in the content and processes related to management learning.

Organizations are also aware of the need for management education to its personnel who are required to operate in a globally networked business environment. Various business schools have deployed technology to facilitate online learning for professionals who are employed. The imparting of management education needs to consider an inter-functional approach or inter-domain approach to provide a complete and comprehensive perspective towards knowledge management and information management. This is due to the fact that knowledge related to one domain would need to be applied in another.

Some of the aspects that have enabled transformation of the management education landscape and enhancing knowledge management / information management include the following:

1. World Wide Web (WWW): The World Wide Web has revolutionized information dissemination and sharing. Internet technologies have enabled learners and instructors to communicate with each other effectively.
2. Collaboration tools: The use of collaboration tools such as email, e-groups, instant messenger, etc. have enhanced learning effectiveness.
3. Digital content: Faculty members create instructional content in digital form, so that it could be easily managed and reused. Further, access to digital resources such as digital libraries, and digital assets of information has made management learning more effective.
4. Online learning: Online learning (e-learning) helps to complement the traditional mode of education and also as an exclusive mode of learning. This has been made possible by technologies of the digital era. The establishment of ‘online universities’ that leverage the advanced technologies of the digital era is one of hallmarks that has revolutionized management education

Results and Discussions

In the space of Educational Management, our first attempt in the understanding and study of quality education has been the construction of a Quality Education Model (QEM) for the public education system in India, using a systems approach with input, process, outcomes and context. The sharing of knowledge is important for faculty members to update / enhance their teaching effectiveness. The use of digital technologies enables faculty members to communicate and collaborate effectively among themselves.

This helps sharing and reuse of instruction content, reference articles, and case studies on the topics among faculties teaching a particular course / module. It also facilitates interactions among faculties handling multiple disciplines of management. Each college and master’s program is unique, but students can use their school advisors as a helpful resource when trying to fulfill specific requirements, especially if a student is studying outside the state where they will work.

Online programs are widely accepted in the education field because these programs allow educators to stay in their own classroom while obtaining the degree. An online master’s degree in education management will allow educators to not only gain the integral education, but also allow them to immediately apply the knowledge and skills they receive from the program. An online degree can give flexibility without compromising educational integrity.

Conclusions and Suggestions

In the Digital era, the imparting of management education has got transformed due to World Wide Web, Collaboration tools, Digital content, and online learning. The economic viability of imparting learning through these modes has enhanced due to increase in communication bandwidth and reduction in cost of computing power. Management in the education world falls under many categories, leadership, administration, principal, vice-principal, dean, director, supervisor, superintendent, or school business manager. These position have the unique opportunity to mold and

manage the systems and teachers that educate and empower our future leaders. These positions not only impact our systems today, but impact our world in the future. Therefore, these positions require thoughtful, dedicated, talented, skilled, and trained leaders. In the light of above discussion on the meaning of management in education it implies the practical measures to activate the system of work will be the best possible assistance or measures in achieving the goals or objectives in a wider extent bearing the best possible value to the students and the society in a grand scale

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5. MANAGING EDUCATION IN THE DIGITAL WORLD

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Abstract

Digitalized teaching is helpful to the students in learning. The students can develop time management skill through online. They can get very much interest in learning through online. The students can get more and more information through online. Most information's are available in online. The students can learn more through online.

Introduction

Education is the process of facilitating learning or the acquisition of knowledge, skills, values, beliefs and habits. Educational methods including storytelling, discussion, teaching, training, research etc. Education is commonly divided into such stages as kindergarten, primary school, Secondary School College and then university.

Definition

`The field of study that deals mainly with methods of teaching and learning in schools.
`The action or process of educating or of being educated; also: a stage of such a process.

Digital Life

Digital world is a research and educational program about radically rethinking of the human. Computer gives interactive experience. It integrates digital world and physical world.

Managing Education in The Digital World

Andy Hockley looks at how the digital world is affecting learning and the way we manage education. He provides some ideas that what to consider and how to plan for online management. Education is moving to some extent online. We can't predict to what degree, but we can say that we cannot ignore the fact that what is done in the classroom or as Homework in ''Self Study''. We can believe that face to face classroom is still the most effective place of learning and teaching. There are growing body of literature helping teachers to make better use of online environment to work with the students and to get the most out of it.

Teachers in The Digital World

Rapid development in Information and Communication Technology (ICT) have made it an important part of daily lives from staying in contact with the people. ICT is useful for the teachers in advancing 21st century learning. The ICT is useful for student's projects or classwork is an active teaching practice that promotes skills for students and gives ''Lifelong success''. ICT is still used less frequently in teaching methods such as working in exercise books. ICT is most important to students.

Better Teaching Online

Online classes are an increasingly important part of higher education. Online classes improve access to education. More than 90 percent of face to face students completed the class and 76 percent earned c or better, just 74 percent of the online students finished and only 65 percent earned at least c. Students often take online classes because they have jobs or other obligations that prevent them for taking classes. Instructors can boost students' motivation and time management skills. The students can easily learn through online.

Conclusion

In this topic we can see that the students can improve the learning through the online better than the face to face learning

6. EDUCATIONAL MANAGEMENT IN THE DIGITAL WORLD

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Abstract

Abstract is an important part of the writing task or oral presentation because it helps to introduce the topic of the research. As for it here, my abstract to show a short note on my presentation on topic "education management in digital world" on sub topic "TECHNOLOGY AND ITS OPERATION". It defines the term education management and state technology and its operations –in higher levels and give some information about educational resources, lecture, books, visualization, animation and simulation, assessment, communication and collaboration in education system of management. Many of these positions require advanced degrees with licenses and certificates specific to the state in which the professional resides thus I have put an end to my topic with points digital technologies are emerging to support education, the educators are tasked with their adoption and impact on study While various digital technologies are emerging to support education, the educators are tasked with their adoption and impact on study

Introduction

The objective of this course is to introduce various forms of educational technology through hand-on project based learning to pre-service teacher candidates. This course provides various opportunities for engagement and reflection on the role these technology tools can play in teaching/learning processes in a classroom. Students will become skilled in some of many digital tools available for schools to use in their classrooms. In addition, students will learn current issues in technology use in classrooms and will become familiar with basic learning theories which will help in determining appropriate applications of educational technology in educational settings. Students will become familiar with virtual schooling and learn how to assist online learning of their students.

Technology in its broadest sense is now more important than ever in the practice of surgery in Canada. This technology can be as wide-reaching and universal to medical practice as the computerized medical record or digital radiography, or as specific as a new type of laparoscopic instrument or new stent for the management of coronary artery disease.

The issues around new technology are, in my opinion, rather poorly understood, and to my knowledge, there is very little guidance on the most effective way to introduce new technology to medical practice

What is Educational Management?

Professionals that includes principals, teachers and other education professionals. Learn about education, job outlook and salary information below. Schools offering College Administration & Leadership degrees can also be found in these popular choices.

Technology and in Operation – In Higher Level

Education adopting new approaches, methods, tools, and technologies. We have experienced a rapid growth in science and technology in the last century that resulted in groundbreaking innovations and exciting new technologies. As always, these innovations create opportunities while posing new challenges. Pedagogical practices have been Educators have always experimented with the art of teaching, which has evolved over centuries by n greatly affected by the advancement of science and technology in the last few decades. This article provides a mini review to briefly describe some of the existing technical achievements that are used in higher education along with their challenges.

Educational Resources

While books are commonly used as educational resources, lectures play a pivotal role in teaching. Digital technologies are changing how books are published and shared. It is also changing the nature of lectures. Newer technologies are allowing educators to use animation and simulation in class. The following subsections provide brief reviews of these areas.

Lectures

Teaching has always involved communication in some forms. Higher education was no different. Classes often comprise of lectures. Lecture series on special topics published as books created a passive learning channel parallel to the classes. Such passive communication persisted with the introduction of broadcasting technologies. Ease of recording videos and editing them are pushing the boundaries of recorded lecturers. Educators are capturing their lectures during or prior to a class. Not only educators, instructional videos are being created by people who are coming from different professions. Free video hosting sites, such as YouTube and Vimeo, are helping to making these videos public. These sites allow students to view the lectures at their convenience. Students can control the pace of these lectures and watch them repeatedly.

Books

Digital technologies are starting to supplement or replace traditional paper-based book. Many printed books now have electronic versions, which are known as e-books (electronic books). Portability of e-books is one of their biggest advantages. Compared to paper-based books, e-books cost less, can contain interactive animation and simulation to describe concepts, can have integrated assessments, and are often customizable. E-books are being published by publishers as well as groups and individuals. Hence, quality of e-books needs to be assessed properly to help educators make informed decisions on proper e-book for a class.Some of these e-books allow educators to view student activities in the book (e.g., exercise completion and example viewing) (Shaffer et al., 2011; Edgcomb et al., 2014). Knowing if students spent enough time on a topic allows educators to better evaluate student performance as well as gauge the level of student engagement. Many of the e-books lack a robust assessment system. Activities or exercises require exact answer to be considered as a correct response

Visualization, Animation and Simulation

Visualization, animation, and simulations are different ways of representing abstract concepts in an interactive way. Educators, across disciplines, use these techniques (Linn, 2003; Falvo, 2008). Visualization can be static and dynamic. Static visualizations often include images, figures, and diagrams. Dynamic visualizations show the progression of a concept along with the state changes. A number of tools are available that support the creation of a wide array of visualization (e.g., Circus and PiktoChart).

Assessments

Different systems have been developed to make assessments robust and effective. Systems, such as Socrative, Kahoot, Edmodo and Nearpad, allow educators to share interactive lessons, engage students, and view student responses in real time. Educators can share and reuse their assessment materials. Many of these systems are not tied to any particular book and do not require extensive setup time, thus making them an ideal candidate for assessment platforms to be used in various courses. In recent years, e-books have also started integrating assessment framework within them. This allows educators to view and measure student progress within the book. While digital assessments usually allow faster grading, the challenges of this technique include standardized approach to support the generation; use, reuse, and sharing of the assessment materials across platforms; measures to ensure the integrity of the test; and ability to integrate and connected assessment resources to course objectives.

Communication and Collaboration

With teaching practices and resources going virtual, the need for effective communication between student and educators increases significantly. It is important for educators to be able to communicate with students using multiple communication channels. Virtual communication methods include email, tele-conference, and video-conference. These methods support one-to-one, one-to-many, and many-to-many communication. Open-source communication software, such as Skype and Google Hangouts, allow educators and students to communicate in real time. Some sites provide screen-sharing services along with video conferencing abilities (e.g., GoToMeeting).

Educators also need to communicate with the class as a whole. Forums, discussion boards, and wikis are usually used as group communication methods. Courses with collaborative components are designed to encourage the communication among students.

Conclusion

As technological advances and pedagogical practices should carefully evolve to adopt the changes while keeping track of the impact of such technologies. One of the advantages of digital technologies in teaching is the ability to capture resource usage and student activities. E-books, educational videos, course materials, etc., are generating a large amount of usage data. Understanding how students interact with the technologies and identifying the impact of the use of advanced systems are critical for the development and sustainability of technology-dependent pedagogical practices.

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7. MODERN TECHNOLOGY IN EDUCATIONAL MANAGEMENT

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Abstract

The paper work emphasizes the importance of modern technology in the educational process. The administration and management applications of ICT are currently popular in schools due to its capabilities of facilitating administration activities from data storage to knowledge management and decision making. In this paper, review of the literatures regarding applications of ICT, types of applications and their effectiveness for administrative activities in school is presented. result, may shed light on administrators to improvise and increase the utilization of ICT in daily administrative tasks to make their work more efficient and effective. If technology changes the ways in which information is shared with in a school, it may thus

change and distribution of power in that school and there by alter fundamentally how the school does its work. Finally, technology may change the relationship between schools and communities, bringing them closer together. ***Keywords:*** *ICT (Information communication technology), shed light, alter, fundamental.*

Introduction

Technology has become an essential part of our everyday life. Accordingly, this integration in school improvement is not only for the purpose of teaching and learning, but also for educational management use, it has become one of the most effective factors in the school improvement. ICT plays a vital role in improving the functional effectiveness of school system. ICT can help the school administrators improve various administrative tasks of school.

Educational management:

According to **Harold Koontz "**management is the art of getting things done through and with people in formally organized groups".

According to **Henri Fayola** "to manage is to forecast and to plan, to organize, to command, to co-ordinate and to control".

Educational management also known as educational administration. Management is the process of reaching organizational goals by working with and through people and other organizational resource.

Objectives of modern technology in educational management

- Give an overview of applications of ICT for school administration and management.
- Describe the role of ICT in school record keeping and its maintenance.
- Use of various technologies for record keeping and scheduling.
- Use technology effectively for communicating with parents.
- Use variety of digital assistive technologies in the classroom.
- Explain how to plan, manage and implement appropriate ICT in infrastructure.
- Develop a technology plan for school.

Role of technology in school administration

Technology plays a vital role in supporting powerful, efficient management and administration in education sector. it is specified that technology can be used right from student administration to various resource administration in an education institution.

Technology in administrative information

1. Student administration

- Usage of electronic media by student to apply for admission.
- Usage of computers for student registration and enrollment.
- Availability of timetable and class schedule in electronic form.
- Usage of computers for maintenance of attendance of student.
- Communication of academic details of student to their parents or guardians through e-media.

2. Staff administration

- Usage of computers for recruitment and work allotment of staff in the institutions.
- Automation of attendance and leave management of staff members in the institution.
- Communication with staff using e-media.
- E-circulars from the institution regarding official matters.

3. General administration

- Usage of e-media for scheduling allocation of halls for examinations.
- Usage of e-media by student to apply for university examinations.
- Usage of e-media for the processing and display of result of student.
- Facility for student to make fees payments electronically.

Potential of technology in record keeping

The usefulness of keeping school records with technology is for the following reasons;

Administrative efficiency

One major setback in achieving the educational objectives of the secondary education is inefficiency of the principal in keeping some records. with the introduction of information communication technology such as computers, digital libraries, e-mails, internet, and so on where information are stored and disseminated, principals can do better in keeping records and become effective and efficient in performing their prescribed as administrators using ICT in keeping school records will help to facilitate and enhance the administration of school towards achieving the goals of secondary education.

Scheduling

Creating a schedule that will maximize instructional time, provide time to meet the needs of the school's student provide time for staff to meet and plan, organize, various curricular and co-curricular activities of the school is very important for any school. Use of ICT helps to ensure that such scheduling happens smoothly.

Some of the important activities of the school that needs to be planned and scheduled are school calendar, teaching timetable, examination timetable, meeting including PTA. There are many software tools which help in such scheduling Google calendar and FET timetable software are two such commonly used tools. Google calendar can be used by individuals like student, teacher and principals in scheduling their personal time. Academic department students club and study groups can create and share Google calendars.

Tools and technologies for connecting with parents

- **E-MAILS:** Individual teacher can have sent e-mails when there are problems in the classroom or for giving parents good or bad news about the learning process of their children. e-mails can be sent individually or in group.
- **Online Survey:** Technology currently permits to get quick feedback from parents through online survey.
- **Media Sharing:** School can use this to communicate with parents by sharing school programme related to videos, videos for training parents on child rearing practices helping students manage stress, time etc.,
- **Sms and Instant Messaging:** school can have sent SMS to the parents when the child is not at school. When the school has to send an urgent message for parents, school can have sent a collective SMS warn parents or an individual's SMS to contact a specific parent.

Technology in infrastructure and its maintenance

The enabling infrastructure required to efficiently maintain the ICT facility will be defined, established and maintained. Regular and regulate supply of electricity, appropriate electrical fixtures adequate power backup and support including alternate sources of energy where needed will be ensured. Physical facility like an adequately large room, appropriate lighting and ventilation durable and economic furniture suitable for optimization of space and long hours of working will be established.

Conclusion

To overall conclusion who rightly challenges technology is largely incompatible with the requirement of teaching .under the right condition where teachers are personally comfortable and at least moderately skilled in using computers themselves ,where the school's duty class schedule permits allocating time for student to use computer as part of class assignment ,where enough equipment is available and convenient to permits computer activities to flow seamlessly alongside other learning and where the teacher's personal philosophies support a student –centered ,constructivist pedagogy that incorporates collaborative projects partly defined by student interest computers are clearly becoming a valuable and well-functioning instructional tools.

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8. THE ROLE OF DIGITAL LIBRARIES IN HIGHER EDUCATION

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Abstract

Digital libraries are quite new – about 20 years of age. At the same time, they have been growing at a fast pace. Digital libraries have the following characteristics –they store, preserve, distribute and protect contents in different formats and, at the same time, they allow interaction between the user and the contents; they are always present, both geographically and over time; they can make works internationally known, enhancing referencing and citations; they can make public the products of the educational process and let them be used as inputs for further learning. This work addresses some aspects of digital libraries that make them suitable tools to support higher education. Examples are presented.

Introduction

A little about Digital Libraries

Digital library projects started in the early 1990s. One of the first projects was Vatican Library Accessible Worldwide – a partnership of the Biblioteca Apostolica Vaticana, the Pontifícia Universidade Católica do Rio de Janeiro and IBM (Brazil, Italy and USA). The items to be digitized were selected from the manuscript and rare book collections. The prototype server was first tested in July 1995. Mintzer et al [1] presented some results of the project in 1996.

Another, at about the same time, was Alexandria Digital Library (ADL) – a project of the University of California, Santa Barbara. It began in 1995 and the digital items are geographically referenced materials. Unlike the

Vatican Project, ADL is still operative and information about it can be obtained from the *What is ADL?* item of the project website Both projects involved universities but none focused on materials created either by faculty or by students. They aimed at making available collections of very specific items that were produced outside the higher education process.

Almost at the same time, in 1993, at Virginia Tech – Virginia Polytechnic Institute and State University, the first electronic theses and dissertations were ready to be published following an initiative of the graduate programs.

After these early activities, a lot has happened in the areas of digital libraries, digital publishing and networking of electronic educational and cultural resources. Side by side with the advancements came a set of challenges, two of them are intellectual property rights in the digital and networked arena, and digital preservation, an ever growing concern as collections migrate to digital formats and traditional versions are discarded. In this world of fast change, digital libraries offer many facilities to education in general and to higher education in particular.

This work addresses some of the roles of digital libraries in higher education; comparisons to traditional libraries are also presented. The following section is devoted to each of them. The third section addresses the two challenges –intellectual property rights and digital preservation – for the
use of digital libraries in this context. The last section comments on the importance of digital libraries and its networks for higher education.

Digital libraries and higher education

Over the centuries, libraries have been the keepers and distributors of books, journals, maps and other materials that are used by students in the learning process. They have also been the legal deposit of part of the products of scholarly publications – theses & dissertations, articles, technical
reports, etc.

In general, students have been patrons of the libraries of their institutions. In order to make more contents available and thus benefit students and faculty, pools of institutions
have engaged in commuting items and/or their copies.
There is no reason for digital libraries not to have the same functions of traditional libraries, except that they can add functions and value due to their digital and networked nature. Let the different functions of a digital library in the higher education context be examined.

Digital libraries and courseware

Books and traditional items have been kept and distributed by the university libraries. On the other hand, class notes, simulators, spread sheets and other materials created by faculty have traditionally been made available by their authors through copies in an informal distribution situation.

The use of ICT – Information and Communication tools has changed the informal distribution to computer and networked based solutions. As consequence, a great amount of contents became available from computers lacking the necessary identification and access control. Identification (description of the digital contents) is important for the search and retrieve actions by users.
The LTSC – Learning Technology Standards Committee is a committee of IEEE – Institute of Electrical and Electronics Engineers whose mission is 'to develop technical Standards, Recommended Practices and Guides for software components, tools, technologies and design methods that facilitate the development, deployment, maintenance and interoperation of computer implementations of education and training components and systems', as stated on the LTSC web page.

The use of digital contents in education has become so important that LTSC has one of its working groups with the specific mission of addressing metadata for LOs. The work of the LTSC is heavily based and interrelated to the developments of the Ariadne Project, the IMS Global Learning Consortium and the actions of NIST – National Institute for Standards and Technology.

Two of LTSC's areas of work are closely related to digital libraries which must comply with the specifications for metadata for LO – Learning Object identification and their management functions.

Digital libraries are suitable tools to manage courseware and additional reference items used in class. Some reasons for this use are:
· Management of documents in all formats in a unified way – texts, animations, interactive exercises, audio files, video streams, e-books, e-journals and online tests can be stored, described and distributed through computers and networks. The management is independent of the type of information, as long as it can be stored in digital files. It also can be shared without human int0ervention making the whole process faster and cheaper.

- Access control – contents can be assigned different types of access according to the classes of users that are entitled to them. Authors can decide if their works are to
- be used by their students only, by any student of a given institution or the public in general.
- Content sharing – authors can make their contents available for other faculty to aggregate into them
- courseware. This can be done without duplication, simply by 'pointing' to the contents with the suitable set of metadata elements.
- Interactivity – contents that are managed by digital libraries can be interactive and based on multimedia. Students can listen to soundtracks, view animated images, solve exercises and have them checked online, write and send comments to authors and/or tutors.
- Customization – some users may require special characteristics of the contents and the system. This is

- true when people with special needs are involved, for example, persons who are blind or visually impaired. System interfaces and contents in digital formats can be customized to fulfill these necessities.
- Reuse – courseware can be developed with a granularity that makes it flexible to combine and support multiple syllabus. Reuse is important because developing courseware is expensive and takes time, so increasing reuse improves efficiency. An example of the importance of this topic can be seen from a note on the Clips & Printers section of the D-Lib Magazine presenting the results of the study "Long Term Retention and Reuse of E-Learning Objects and Materials" that was funded by JISC – Joint
- Information Systems Committee in the United Kingdom.
- Cross-institution cooperation – digital libraries in general are connected to the Internet, this allows that
- contents be used from different cooperating institutions, as long as the LOs are described (metadata) and
- managed in a suitable way. An example of the importance of cooperation is MERLOT – Multimedia
- Educational Resource for Learning and Online Teaching, an organization whose mission, as stated on the website, is "MERLOT is a leading edge, user-centered, searchable collection of peer-reviewed, higher education, online learning materials created by registered members, and a set of faculty development support services. MERLOT's vision is to be a premiere online community where faculty, staff, and students from around the world share their learning materials and pedagogy. MERLOT's strategic goal is to improve the effectiveness of teaching and learning by increasing the quantity and quality of peer reviewed online learning materials that can be easily incorporated into faculty
- designed courses." Digital libraries are useful tools to manage large quantities of LOs.
- Any place and at any time – students study in different hours of the day any day of the week, this is more significant when distance learning is considered. Students can be in any country and accessing courseware anytime. Since digital libraries are available 24/7 (24 hours per day, 7 days per the week) and the Internet connects the whole world, courseware is always available from any geography.

At PUC-Rio, there has been some experience in the use of digital libraries to manage courseware. The results have been satisfactory in terms of access and sharing levels.
The Maxwell System allows 5 access levels and 4 sharing levels, and this has given faculty a reasonable flexibility in the use of contents, yielding a fair amount of reuse of basic contents.

Digital libraries and references

Students go to libraries to look for materials that go beyond course contents. They seek additional books, journals, theses & dissertations, technical reports and other items that enhance the learning process.
This is extremely important in the high undergraduate years and in the graduate level. Research is based on a lot of searching, retrieving and reading. So, libraries must carry and make available collections to fulfill this need. Some examples in the traditional world are the subscriptions of scientific journals and conference proceedings.
Digital libraries, like their traditional counterparts, can hold reference materials. In addition, they have all the advantages mentioned in the context of courseware. At the same time, the characteristics of being available all the time from anywhere and of cross-institutional cooperation are the strongest points.
Digital libraries in their role of courseware and reference holders and distributors are of paramount importance in distance learning and training. A very special situation occurs in continued education when focusing on training professional staff who works in remote locations, as for example engineers in road and dam constructions, and offshore oil drilling. Current trends in continued education make digital libraries very useful, specially due to the possibility of customization of contents to meet individual needs.

Digital libraries and the products of higher education

In general, when someone thinks about educational contents, courseware comes to mind. But there are contents that are produced by higher education processes. They are results (outputs) of all levels – undergraduate students write projects in other to get their degrees, while master and doctoral students research, write and publish theses/dissertations.

Besides being results of higher education, these works are reference materials used by other students. They are also contents that researchers seek. These & dissertations are especially important items
because they contain state-of-the-art results and up-to-date bibliographic reviews. They have received the most attention in terms of dissemination among the results. The use of digital libraries makes theses & dissertations much more available and, for this reason, much more visible.

Besides this, ETDs – Electronic Theses and Dissertations allow multimedia to be used making the works richer and more attractive.

In 2000, Hagen and McMillan presented some interesting points related to ETDs; two are worded being mentioned. The first is that much of the research developed during graduate work ends up by not being published in journals and for this reason is not known. Digital libraries

make this knowledge easily and widely accessible; the whole process is much faster than traditional publication. Virginia Tech started requiring ETDs in 1997; the total requests for theses and dissertations rose from 31,171 in 1996 to 1,090,113 in 1999. The second important point is the decrease in administrative costs: paper, binding, handling and shelf space.

Universities all over the world have engaged in ETD projects. A lot of work has been done in the various countries and in the international scenario. Some countries established national consortia of ETD digital libraries and a national union catalog, as for example Brazil and Lithuania; others have national regional consortia, as for example the United States; a third group is composed by countries that have formed regional multi-country consortia like the Australasian Digital Theses Program; another group of countries has consortia and individual university contributions, like the United States; and some countries have only individual contribution from the universities.

Digital libraries and open access

All over the world, intellectual property rights (IPR) are protected by law. This is important because IPR are basic rights of democracy and stimulus for intellectual creation. At the same time, authors may want to share their works, especially in the academia. This is the idea behind the Creative Commons, a non-governmental organization created in 2002. The goal of this organization is to help authors share their works under the idea of “some rights reserved” instead of “all rights reserved”. They neither suggest that authors’ rights be violated nor that copyrights be abandoned; only that works be shared in the extent authors find suitable. The motto on their website is “Share, reuse and remix – legally”. This motto contains ideas that can easily be implemented if digital libraries are used to manage digital contents.

Challenges for digital libraries

Digital libraries face many challenges – interoperability; 24/7 operation; multi-language, multi-culture and multi-legislation situations; multiple types of information and ever changing digital formats; information asset security; digital preservation; and IPR – Intellectual Property Rights.

The last two seem to be the most crucial. Worldwide many efforts have been devoted to the study of these two topics and to finding solutions for the problems they represent in the use of digital contents.

Digital preservation can be seen from three different points: (1) the physical preservation of the supporting medias (HDs, CDs, DVDs, tapes); (2) the technological preservation to avoid technological obsolescence; and (3) preservation of access. Some important actions can be mentioned dating as far as the 1990s.

In 1994, the Commission on Preservation and Access and the Research Libraries Group [35] created the Task Force on Digital Archiving. In 1997, the Commission on Preservation and Access merged with CLIR – Council on Library and Information Resources.

Conculsion

Libraries have been the companions of higher education for many centuries. They have preserved and given access to all sorts of materials – books, manuscripts, rare documents, journals, maps, etc. – that have supported the process of learning. They have also been the keepers of materials produced by students, faculty and researchers – graduate projects, theses & dissertations, technical reports, etc. – in this sense they have functioned as the institutional archive. It is important to remark that, for institutionally created materials, the library has to grant access while preserving the documents as an archive. Theses and dissertations are scientific works but, at the same time, are parts of the history of the institution.

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9. AUTOMATED STUDENT RECORD SYSTEM

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Abstract

Automated students record systems(SRS) manage student data and central part of the core administration on function for every institution. SRS support the maintenance of personal and study information relating to handling the admissions process, enrolling new students and storing teaching open on choices, maintaining records of absences and attendance etc. Digitalization has created a thorough change in all aspects of the above said managerial functions. The paperless office has thoroughly changed the whole system of management. Today, students' records are used for many important educational purposes. So automated student record system also benefits for students, parents, staff members also. Because it gives quicker response whenever we need it. Today the time management is very important it also helpful for time managing. And also it gives accurate records. It reduces manual process. An effective automated student record system should provide the information required on request, easily without burdensome trial and error searching. So it is very useful for us.

Introduction

As organizations of all sizes transform transition to digital management of all their records – paper and electronic – they are addressing a range of challenges that can slow their progress, particularly if they don't engage the right tools, technologies, expertise and partners. Made laziness among the students. So, teachers must give interesting topics to students. It may improve the knowledge. After seeing the performance of the students, teachers will give their assessment marks. Also, teachers must carefully handle it in separate log book. It may help teachers to note internal marks easily.

Student Record Systems

Student Record Systems (SRS) manage student data and are a central part of the core administration function on for every institution. SRS support the maintenance of personal and study information relating to:

- Handling inquiries from prospective students
- Handling the admissions process
- Enrolling new students and storing teaching option choices
- Automatically creating class & teacher schedules
- • Handling records of examinations, assessments, marks, grades and academic progression
- Maintaining records of absences and attendance
- Recording communications with students
- Maintaining discipline records
- Providing statistical reports
- Maintenance boarding house details
- Communicating student details to parents through a parent portal
- Special Education / Individual Education Plan (IEP) services
- Human resources services
- Accounting and budgeting services
- Student health records

Steps for Designing and Implementing an Automated Student Record System

The recommended process for designing or redesigning an automated student record system is described below. These twelve steps whole process is ongoing. The standards and principles upon which the system is designed will have to be continually monitored and revised as needed by an organization. Detail the sequence to use and the issues that should be resolved when identifying the solution for your education organization. As with most systems, however, these steps and their associated issues are never fully resolved because the

1. Determine the desired uses of the student record system.
2. Identify federal, state, and local regulations affecting the maintenance of student records.
3. Select the overall contents of the student record system.
4. Select the data elements to be kept in the student record system.
5. Select a system for assigning a unique identifier to each student.
6. Determine the physical design of the student record system.
7. Identify the format for the data within the student record system.
8. Determine how you will enter or import data into the student record system.
9. Determine your procedures for providing access to the system.
10. Plan ways to ensure the integrity of the data in the student record system.
11. Plan procedures for doing standard and ad hoc analysis and reporting.
12. Develop procedures for appropriate reporting of student data

Benefits of a well-designed automated student Record System

Well-designed automated student record system will reach more than a teachers and administrators. It will also benefit the students, parents, community, legislators, and others by providing information on the functioning and

success of the education system. Some of the most important advantages are discussed below.

- **Cost savings and cost avoidance** A well-conceived and implemented automated student record system can reduce the costs of handling the paperwork associated with record keeping. Even when such a system proves initially expensive and actual reductions in current costs are not achieved, it is justified given future savings and efficiency. Nevertheless, system developers and implementers have to contend with two major concerns in order to maximize the cost-saving benefits of an automated system. First, it is sometimes thought that automated data systems do not result in actual savings. Granted there are computer purchase costs and personnel needed to maintain the system. These costs, while not minimal, should pay for themselves with the usefulness of the data and the reduced time data providers have to spend on data collections. Concerns about the reliability of computers may also lead some staff members to continue keeping their old records, "just in case." In fact, during the early stages of automating data it is often wise to maintain the data in two places, so that glitches can be resolved before relying solely on the automated system.
- **Quicker response.** When information from a student record is requested, it is usually needed promptly. A principal making placement decisions about a new student needs the previous school's records immediately to assign the student to the appropriate programs and services. A counselor with a student in crisis needs immediate access to records to help intervention specialists effectively deliver their services. A school board making a policy change to a "no-pass/no-play" rule needs analyses to support its decision. A well-designed student record system allows for timely retrieval of needed information in these, or similar situations.
- **Accuracy:** Data quality is basic to a well-designed student record system. Having clearly defined data elements that are used consistently promotes data quality. Paper records have traditionally been considered accurate, although not necessarily complete or accessible. Maintaining data quality as information is shared, analyzed, and reported is a characteristic of a well-designed system. Accuracy is vital at every stage, from data collection, to entry, to maintenance in the system. Accuracy provides users with the confidence they will require to rely upon a student record system.
- **Getting the needed information** An effective automated student record system should provide the information required on request, easily, and without burdensome trial-and error searching. From the first steps of designing the system, the queries that will follow are anticipated and accommodated. Similar to an office filing system, the adequacy of a student record system is often judged by how much time and effort are required to find and retrieve information. Therefore, a key part of the design of a student record system is its process for access, retrieval, and reporting.
- **Moving data among different education agencies** A well-designed automated student record system allows for the easy and efficient movement of student records among levels of the education system using standard formats. For instance, when a student moves from one school to another within the same district, or to another district, the information can be extracted, prepared, and transferred electronically. The school receiving the electronic record can download the student record, thus eliminating the need for re-entering the information. Electronic data can also be received more rapidly than paper documents, enabling quicker decision-making about the student. Such a system can also be used to transmit student records to a state education agency that collects individual student records.
- **Meeting Resistance to Student Records at the State Level**
  Some state education agencies have met extensive resistance to the collection of individual student records at the state level. Parental concerns about educator access to student records is a serious issue, and must be addressed in order to be successful in the development of an effective state-level student record system. Successful states have carefully documented their planned uses of the data, as well as stating what they do not intend to do with the records. They have obtained the support of state officials for the collection of student records; and they have carefully designed systems for ensuring secure transmission of student records to the state education agency as well as secure maintenance within the agency. Comprehensive documentation is essential.

Selecting Data to Collect

One state education agency held many meetings to decide what categories of data it wanted to receive in the individual student records it would be collecting from schools. Among the types of information, it hoped to obtain were data related to student participation in various state and federal programs, assessment data, and demographic data. A long list of data elements was identified, far longer than the Department knew was practical when just starting to collect student records. With the assistance of various committees, the Department was able to prioritize the data elements into two levels, essential and desirable. Department staff decided to begin collecting only the data elements identified as essential.

Determine the physical design of the student record system

Data can be stored in many ways, ranging from hand-written paper documents, to microfilm or microfiche,

to electronic data files on computer tape, removable disk (diskette), hard drive, or CD-ROM. A student record system could use any or all of the available media if it is feasible to link or access each type of medium. However, the most efficient student record systems have as much data as possible entered into a computer system, and the data are available online to those with a need to have access. Several considerations are important in the selection of how your student data will be stored and accessed. These include the number and size of records, space available for storage, the permanency of the records, and the cost of storage. Cost has at least three components: the cost of entering the data or exchanging them between media; the cost of purchasing the components of the storage system, such as filing cabinets, computer disks, microfilming equipment, etc.

Consequences of Poor Data Quality

One large city school district discovered that large amounts of state and federal money were not received one year because of errors in how the data were maintained in the student record system and how the reports were produced. Since individual student records were sent to the state education agency, it was important that all relevant program participation be noted on the student records. That year, when the records were sent to the state, no one bothered to do basic checks on program participation rates and other relevant statistics. Consequently, it was not noticed that there were no students coded as Title I program participants, resulting in the loss of many dollars for the district.

Conclusion

With proper planning and management, a student record system can be a valuable resource to many people, ranging from parents and local school officials to researchers and policy-makers. While many of the decisions concerning design and implementation are made only once, it is important to note that some aspects of planning and management are recurring and must be reviewed regularly to ensure long-term effectiveness.

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10. நவீன முறையில் ஓலைச்சுவடிகளை மேலாண்மை செய்தல்

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கருத்துச் சுருக்கம்

- ✓ தமிழனின் தொன்மையான கலாச்சாரத்தை தாங்கி நிர்ப்பவை பழபெரும் சுவடிகளே ஆகும். ஒருவரின் பட்டறிவையும் , அனுபவத்தையும் எழுதிவைத்த ஒலசுவடியைப் பாதுகாப்பது மிகப்பெரிய செயல்.
- ✓ இதை இணைத்தின் துணைக் கொண்டு பயன்படுத்த ஏதுவாக இருக்கும் கண்டறியப்பட்ட ஒலைச்சுவடிகள் எங்கெங்கு இருப்பினும் யாவற்றையும் மின்னாக்கம் (Scan)செய்து.இணைத்தில் உலாவர செய்ய வேண்டும்.

முன்னுரை

- ✓ ஒரு அமைப்பு சிறப்புடன் செயல்பட மனித ஆற்றல் , பொருள் வளங்கள் , பணம் , எந்திரங்கள் ஆகியவற்றை சிறந்த முறையில் பயன்படுத்தி நிர்ணயித்த இலக்கை அடைவது மின் ஆவண மேலாண்மை ஆகும்.

கல்வி மேலாண்மையின் நோக்கங்கள்

- ✓ கடினமான பணிகளையும் அது சார்ந்த இன்னல்களையும் குறைத்தல்.
- ✓ கலைத்திட்டத்தில் சீர்திருத்தம் , கற்றல் - கற்பித்தல் முறையில் புதுமைகளை ஏற்படுத்துதல்.
- ✓ கல்வியின் நீண்டகால மற்றும் குறுகிய கால இலக்கினை உருவாக்குதல்.
- ✓ கல்வி சார்ந்த ஆராய்ச்சிகளுக்கான வசதிகளை உண்டாக்குதல்.

தோற்றம்

- ✓ எழுத்துக்கள் முதன்முதலில் பாறைகளில் எழுதப்பட்டன. எழுத்துக்கள் வடிவம் பெரும் போது பனையோலையில் எழுதப்பெற்றன.

- ✓ அதன் தோற்றமானது 4 செ.மீ முதல் 90 செ.மீ வரை நீளம் வரையறுக்கப்பட்டுள்ளது.

தயாரிக்கும் முறை

- ✓ பனையோலையைப் பதப்படுத்தி , ஓட்டையிட்டுத் தொகுத்து கம்பியை இடையே செலுத்தி , அதனோடு பஞ்சினால் ஆன கயிற்றை இணைத்து மேலும் கீழும் பலகையிட்டு , கயிற்றால் இறுகப்பிணித்துக் கொண்டும் தேவைபட்டபோது கயிற்றை அவிழ்த்து தனித்தியே பிரித்தும் பனை ஓலைகளில் எழுத்தாணியால் பண்டைய தமிழகத்தின் புலங்களையும் நிலங்களையும் பொறித்து வைத்தனர்.

மேற்கோள்

- ✓ "இருள்மறை மிடற்றோன் கையில் ஓலைக்கண்டு அவையோர் ஏவ அருள் பெறுகாரணாத்தானும் ஆவணம் தொழுது-வாங்கிச்
  சுருள் பெறுசபையோர் கேட்ப வாசகம்-செப்புகின்றான்."

[பெரியபுராணம் - தடுத்தாட் – 57]

இலக்கியத்தில் சுவடி

- ✓ சீவகசிந்தாமணி -> சீவகன் தூதுவிடும் ஓலையைக் கூறுகிறது.
- ✓ [சீவகன் நூல்புடைத்தாற் போன்று இனிய வித்தகம் சேர் நுண்வரிகள்]

ஓலைச்சுவடி படிவமாக்கம்

- ✓ வாழ்நாள்- 500 ஆண்டுகள் ஆகும். இத்தகைய பழமைவாய்ந்த ஏடுகளை பாதுகாப்புடன் பாரமரிக்க வேண்டும்.
- ✓ ஓலைச்சுவடிகளை மின்படிவமாக்க அறிவியல் வளர்ச்சியில் உருவான வருடுதல் (Scanning).
- ✓ எழுத்துகள் கண்டறிந்து வாசிக்கும் பொறி(optical character Reading).
- ✓ நுண்கதிர் படப்பிடிப்பு (Micro Film) & டிஜிட்டல் படப்பிடிப்பு (Digital Camera) போன்ற ஏதேனும் ஒன்றை பயன்படுத்தலாம்.

பாதுகாக்கப்படும் இடங்கள்

- ✓ **சென்னை:-**
  - ➢ சென்னை கீழ்த்திசைச்சுவடி நூலகம் , உ.வே.சா நூல்நிலையம்
  - ➢ பிரமஞான சபை நூலகம் , தமிழ்நாடு தொல்பொருள் ஆய்வுத்துறை
  - ➢ உலகத்தமிழாராய்ச்சி நிறுவனம் , சித்த மருத்துவ ஆராய்ச்சி நிலையம்
  - ➢ ஆசியவியல் ஆய்வு நிலையம்
- ✓ **காஞ்சிபுரம்:-**
  - ➢ காமகோடி பீடம் , ஸ்ரீசங்கராசாரியார் மடம்
- ✓ **பாண்டி:-**
  - ➢ பிரஞ்சிந்திய கலைக்கழகம்
- ✓ **விருத்தாசலம்:-**
  - ➢ குமார தேவமடாலயம்
- ✓ **திருச்சி:-**
  - ➢ குமார தேவமடாலயம்,துறையூர்.
- ✓ **தஞ்சை:-**
  - ➢ சரஸ்வதி மகால் நூலகம் , தமிழ் பல்களைக்கழகம்
  - ➢ ஸ்ரீகாசிமடம் , திருப்பனந்தாள்
  - ➢ தருமபுர ஆதீனமடாலயம், மயிலாடுதுறை , திருவாவடுதுறை ஆதினம், திருவாவடுதுறை
- ✓ **மதுரை**:-
  - ➢ தமிழ்சங்கம் , மதுரை காமராசர் பல்கலைக்கழகம்
- ✓ **கோவை:-**
  - ➢ தவத்திரு சாந்திலிங்க அடிகளார் திருமடம்,பேரூர்
- ✓ **ஈரோடு:-**
  - ➢ கலைமகள் கல்விநிலையம்
- ✓ **கேரளா , ஆந்திரா , மேற்குவங்கம்**.

இந்தியாவில் ஓலைச்சுவடியின் சதவீதம்:-

மருத்துவம் - 50% , ஜோதிடம் - 10% , கலை,இலக்கியம் -10% , வரலாறு - 10% ,

சமயம்-10%, இலக்கணம் - 5% , நாட்டுபுற இலக்கியம் - 10%

ஓலைச்சுவடியின் வகைகள்:-

நீட்டோலை, மூலஓலை, சுருள்ஓலை, குற்றமற்ற ஓலை, நாளோலை, திருமந்திர ஓலை, மணவினை ஓலை.

கீற்றின் புள்ளிவிவரம்:[ஓலைச்சுவடி]

- **சரஸ்வதி மஹால்:-**
  - ✓ 3 லட்சத்திற்கு மேற்பட்ட சுவடிகள் இருக்கின்றன.
  - ✓ 1627 அச்சிடப்பட்டது 50 நூல்கள் உள்ளன
  - ✓ திருக்குறள்,மணிமேகலை.....
- **சென்னை கீழ்திசை நூல்கள்:-**
  - ✓ 72 ஆயிரத்து 314 சுவடிகள் இருக்கின்றன.
  - ✓ தமிழ்,தெலுங்கு,உருது,மரபு,பாரசீகம் ஆகிய மொழிகளில் உள்ளன.
- **மைசூர்கல் வெட்டுத்துறை:-**
  - ✓ 75% தமிழ் மொழியில் உள்ளன.
- **தர்மபுரி:-**
  - ✓ 284 ஓலைச்சுவடிகள் சேகரிக்கப்பட்டது.
  - ✓ சேகரிக்கப்பட்டதை பாதுகாப்பாக சென்னை கீழ்திசை நூலகத்திலுள்ளது.
  - ✓ தர்மபுரி அகழ்வைப்பகம் 76 வகைகள் அரிய ஓலைச்சுவடிகள் பாதுகாப்பாக உள்ளது.

மின் ஆவணத்தில் கீற்றின் பங்கு:-

- ✓ ஓலைச்சுவடிகள் மின்படிவ தகவலைச் சேமித்தலும்.
- ✓ ஓலைச்சுவடிகள் மின்படிவ தகவல் வடிவ மாற்றுதலும்.
- ✓ ஓலைச்சுவடி தகவலை இணையத்தில் உள்ளீடு செய்தலும்.
- ✓ மூலபாட ஆய்வு எளிதாகும் , மொழி ஆய்வு எளிதாகும்.

முடிவுரை:-

- ✓ ஓலைச்சுவடியை மின் ஆவணம் பயன்படுத்தி பாதுகாக்கும் முறை நமக்கு கிடத்த மிக பெரிய வரம்.
- ✓ யுனெஸ்கோ நிறுவனம் அழிந்துவரும் பண்டைய தமிழ் ஓலைச்சுவடிகளைப் புதுப்பித்து. பாதுகாக்க பல நடவடிக்களை மேற்கொண்டு வருகிறது. வெளிவராத சமஸ்கிருத ஓலைச்சுவடிகளை அகரவரிசையில் தொகுத்து அரும் பெறும் சொல்லகராதியான.
- ✓ 'என்சைளோ பீ டியாவை' சென்னை பல்கலைகழகம் உருவாக்கியுள்ளது.
- ✓ "மறந்துகொண்டே இருப்பது மக்களின் இயல்பு நினைவு படுத்திக் தூண்டிக் கொண்டே இருப்பது நம் கடமை கீற்றினை வளர்த்தெடுக்க உதவுங்கள்"

மின் ஆவணத்தின் பயன்பாட்டை நோக்கி காலடி எடுத்துவைக்க இதுவே ஆரம்பப்புள்ள

11. கணினி வழி கல்வி மேலாண்மைத் திட்டமிடுதல்

A. THASLIMA and

T. ABINAYA, B.Ed. II Year, Krishnasamy College of Education for Women, Manapet, Puducherry.

கருத்துச்சுருக்கம்

உலகத்தோடு ஒட்ட ஒழுகல் பலகற்றும்
கல்லார் அறிவிலா தார் - குறள்

உலக முன்னேற்றத்தோடு நாமும் நம்மை மேம்படுத்திக் கொண்டு உயர வேண்டும். இல்லையேல், உலகம் நம்மைப் புறந்தள்ளிவிடும். இந்த நூற்றாண்டின் அறிவு விரிவுக்கும் உலகத் தொடர்புக்கும் வாயிலாகத் திகழ்வது கணினி. கணினி இல்லாதவர் உலகத் தொடர்பில்லாதவரே என்ற அளவிற்குக் கணினியின் பயன் பாடுகள் வந்துவிட்டன. கணினியின் மூலம் உலகெங்கும் கிடைக்கும் செய்திகளை அறிந்து கொள்ளலாம். வீட்டிலிருந்து கொண்டே பல இடங்களின் சிறப்பினை அறிந்து கொள்ளலாம். கல்வி கற்கும்

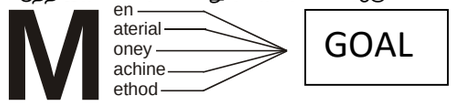
நிலையிலும் கணினி உள்ள. அந்நோக்கில் இக்கட்டுரையில் கணினி யின் வழி கல்வி மேலாண்மையைத் திட்டமிடுதல் பற்றி காணலாம்.

முன்னுரை :

மேலாண்மை (Management) என்ற சொல் Manage னும் பிரெஞ்சு மொழிச் சொல்லிலிருந்து உருவானதாகும். இதற்கு மேலாளல், கையாளுதல் அல்லது இல்லம் பேணுதல் எனப் பொருளாகும்.

ஒரு அமைப்பு சிறப்புடன் செயல்பட மனித ஆற்றலையும், இயற்கை வளங்களையும் ஒன்றிணைந்து முறையாகத் திசைப்படுத்து வது மேலாண்மை எனப்படும். - கீத் மற்றும் குபலினி

சுருங்கக் கூறின் மனித ஆற்றல் (Men) பொருள் விளங்க (M aterial),
பணம் (Money), எந்திரங்கள் (Machine) ஆகியவற்றை சிறந்த முறையில் (Method)
பயன்படுத்தி இலக்கை அடைவது மேலாண்மை ஆகும்.



பள்ளி பதிவேடுகள் : (School Record)

பள்ளி என்பது ஒரு முக்கியமான பொது அமைப்பு (அ) நிறுவனம், கல்வியின் குறிக்கோள்கள், நிகழ்ச்சிகள், பள்ளிசெயல் திட்டங்களும் நிறைவேற்றப்பட்டனவா என்பனவற்றைக்குறித்து அரசு, சமூகம், பெற்றோர் ஆகிய பல்வேறு பிரிவினர்களுக்குப் பள்ளி செய்தியினை தெரிவிக்க வேண்டும். அவற்றில், பள்ளியில் பராமரிக்கப் பட வேண்டிய பதிவேடுகள் பராமரிப்பதில் சில முக்கிய குறிப்புகள்

- பள்ளிப் பதிவேடுகளில் குறிக்கப்படும் அனைத்துத் தகவல்களும் . புள்ளி விவரங்களும் துல்லியமானவையாக, சரியான, தகுதியுள்ள நம்பகத்தக்கவனாக இருத்தல் வேண்டும்.
- பதிவேடுகள் எல்லா விவரங்களையும் முழுமையாகத் தருதல் வேண்டும்.
- பல்லாண்டுகள் பயன்படுத் தக்க வகையில் பதிவேடுகள் அமைதல் வேண்டும்.

இதுபோன்ற முக்கிய பதிவேடுகளை பள்ளிகளில் கணிணி முறையில் திட்டமிட்டு செயல்படுத்தலாம். பல ஆண்டுகள் ஆனாலும் இவற்றின் குறிப்புகள் என்றும் அழியாது இருக்கும்.

பதிவேடுகளின் வகை :

நான்கு பொருளுணர்ந்து கொள்ளும் வகையில் பள்ளியில் பராமரிக்கப்படும் பல்வேறு பதிவேடுகளை கீழ்க்குறித்துள்ளவாறு வகைப்படுத்தப்படலாம்.

நிலையான பதிவேடுகள் :

- சேர்க்கைப் பதிவேடு
- ஆசிரிய உறுப்பினர்களின் பணிப்பதிவேடு
- அலுவலகச் சுற்றறிக்கைகள்
- பார்வையாளர் புத்தகம்
- நீண்டகால விடுமுறையளித்தல் பதிவேடு

30 ஆண்டுகள் பாதுகாக்கப்பட வேண்டிய பதிவேடுகள் :

- ஊதியம் வழங்கும் பதிவேடு
- ஆண்டுதோறும் ஊதிய உயர்வு வழங்கும் பதிவேடு
- சம்பள நன்கொடை வழங்கும் பதிவேடு
- ஆசிரியர் வருகைப் பதிவேடு

10 ஆண்டுகள் பாதுகாக்கப்பட வேண்டிய பதிவேடுகள் :

- தொடர் நடவடிக்கைப் பதிவேடு
- சில்லரைச்செலவு - இரசீது புத்தகம்
- சம்பளம் வாங்கும் ரசீதுப் பதிவேடு

5 ஆண்டுகள் பாதுகாக்கப்பட வேண்டிய பதிவேடுகள் :

- மாணவர் வருகைப் பதிவேடு
- சீருடை, இலவசப் புத்தகம் வழங்கும் பதிவேடு
- பள்ளி வளர்ச்சிப் பதிவேடு

ஓராண்டு பாதுகாக்கப்பட வேண்டிய பதிவேடு

- மாணவர் விடைத்தாள்கள்
- பிற தகவல் தொடர்புக் கடிதங்கள்
- தற்செயல் விடுப்பு விண்ணப்பம் - வழங்கும் புத்தகம்
- ஆசிரியர்களின் தனிப்பட்ட மதிப்பெண் பதிவேடு

கணினி வழி மேலாண்மை :

- ஒவ்வொரு பள்ளியிலும் பராமரிக்கப்பட வேண்டிய பதிவேடுகள் அனைத்தும் தாள்களின் அமைப்பில் இருக்கும். அவற்றை பல ஆண்டுகள் வைத்திருப்பது என்பது மிகவும் சிரமமான செயல் ஆகும். ஆகவே அனைத்து செய்திகளையும், பதிவேட்டு ஆவணங்களையும் கணினி வழி பராமரிக்க வைக்கலாம். இவை பல ஆண்டுகள் ஆயினும் அவை அழியாத ஒன்றாக இருக்கும்.
- மாணவர்கள், ஆசிரியர்களின் செயல்பாடுகள், வளர்ச்சி நிலை ஆகியவை மட்டுமின்றி மாணவர்களின் வீட்டு பாடத்தினை SMSவழியாக நவீன (Digital) முறையில் செய்திகளை பரிமாறிக் கொள்ளலாம்.
- ஆசிரியர்களின் பாடம், பாடப்பொருள் சார்ந்த குறிப்புகள், போன்ற வற்றையும் நாம் கணினி வழிமுறையின் கீழ் மேலாண்மை செய்து கொள்ளலாம்.
- பள்ளி தொடர்பான செய்திக்கான தற்செயல்விடுப்பு (Casual leave) ஈட்டியவிடுப்பு (Earned Leave) சாதாரண விடுப்பு (Extraordinary Leave) சுற்றறிக்கைகளும் குறிப்பானைகளும் (Circulars and memos) கடிதம் போக்குவரத்து (Correspondence) முறைகளையும் கணினிவழி மேலாண்மை செய்யலாம்.

கல்வி மேலாண்மையில் கணினி வழி

- திட்டமிட்ட குறிக்கோளும், தொலை நோக்கும் Vision
- நற்பண்புகளை வளர்த்தல்
- குழந்தைகளிடம் படிக்கும் ஆர்வத்தைத் தூண்டுகள் (படங்கள், கதைகள்)
- சிந்தனையைத் தூண்டுதல்
- மாணவர்களின் தனித்திறனை வளர்த்தல்
- ஆய்ந்தறியும் மனப்பாண்மையை வளர்த்தல்
- உற்றுநோக்கும் திறனை வளர்த்தல்

தொலைநோக்கு Mission

- மாணவர்களின் அறியாமையைப் போக்குதல்
- சமூக வளர்ச்சித் திட்டங்களில் பங்கு பெறச்செய்தல்
- வேலை வாய்ப்புகளுக்கு மாணவர்களைத் தயார் செய்தல்
- சமூகப் பயனுள்ள ஆக்கச் செயல்களில் ஈடுபடச்செய்தல்

முடிவுரை :

காலங்கள் மாற மாற மனிதன் மட்டுமின்றி புதிய தொழில்நுட்ப முறைகளும் மாறிவருகின்றன. இன்றைய காலக்கட்டத்தில் சிறுகுழந்தைகள் முதல் பெரியவர்கள் வரை அனைவரும் இணையம் என்ற ஒன்றில் இணைந்து உள்ளனர். எனவே அனைத்து பள்ளி பதிவேடுகள் சிறப்பு நிகழ்வுகள் அனைத்தையும் நாம் கணினி வழி மேலாண்மை செய்வதன் மூலம் பல நன்மைகள் கிடைக்கின்றன. 2020 -ல் இந்தியா வல்லரசாகும் என்ற அப்துல்கலாம் ஐயாவின் கனவுபோலவே 2020 அனைத்து முறைகளும் நவீன முறையில் (Digital Method) மாறும் என்ற நம்பிக்கை உள்ளது. காலம் பொன் போன்றது என்ற பழமொழிகளுக்கு ஏற்ப காலத்தையும் நேரத்தையும் கணினி சேமித்து வைக்கின்றது.

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1. FINANCIAL MANAGEMENT IN THE DIGTIAL WORLD

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Abstract

Business concern needs finance to meet their requirements in the economic world. Anykind of business activity depends on the finance. Hence, it is called as lifeblood of business organization. Finance also is referred as the provision of money at the time when it is needed utilization in business concerns. Banking refers to provision and availment of banking and financial services with the help of mobile tele-communication devices such as Mobile banking services, Account information, Mini-statements and checking of account history. The advent of technology and increasing use of smartphone and tablet based devices, the use of Mobile Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before. There is a challenge of interoperability between mobile banking applications due to perceived lack of common technology standards for mobile banking.

Key Words*; Life blood, Business organization, Mobile banking, Mini-statements, smartphone, tablet, tele-communication.*

Introduction

Business concern needs finance to meet their requirements in the economic world. Anykind of business activity depends on the finance. Hence, it is called as lifeblood of business organization. Whether the business concerns are big or small, they need finance to fulfil their business activities. In the modern world, all the activities are concerned with the economic activities and very particular to earning profit through any venture or activities. The entire business activities are directly related with making profit. (According to the Economics the concept of factors of production, rent given to landlord, wage given to labour, interest given to CapitaLand, profit given to shareholders or proprietors), a business concern needs finance to meet all the requirements. Hence finance may be called as capital, investment, fund etc., but each term is having different meanings and unique characters. Increasing the profit is the main aim of any kind of economic activity.

Meaning of Finance

Finance may be defined as the art and science of managing money. It includes financial service and financial instruments. Finance also is referred as the provision of money at the time when it is needed. Finance function is the procurement of funds and their effective utilization in business concerns. The concept of finance includes capital, funds, money and amount.

Financial Services

- Transfer funds between your accounts ,or third party accounts held with any other Banks
- Transfer money to any selected bank branch within India, instantly through IMPS (24x7x365)
- Online Booking of Fixed Deposits, Recurring Deposits and **Goal Based Savings**
- Pay your bills online for utilities such as electricity, telephone bills, subscription payments, charity, etc.
- Purchase new Mutual Fund units, redeem existing units, make SIP requests or cancel SIP requests

Informational Services

- View your account balance, account statement, account activity and account details, updated on real-time basis
- View the details of all your fixed deposits and recurring deposits with YES BANK online and even view the TDS details for interests earned on fixed deposits
- View all your investments, current portfolio value, NAVs, etc. with MF Online
- View your average quarterly balance, schedule of charges and contact details of relationship manager

Service Request

- Request for account statement, cheque books and debit card
- Update your PAN and Nominee registration details
- Register for Combined, flexi-frequency e-statements and Fixed Deposit e-advice
- Download Deposit Slip, Form 16 A TDS certificate and Gujarat Govt VAT(Challan)

A mobile banking conceptual

Mobile Banking refers to provision and availment of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank and stock market transactions, to administer accounts and to access customised information.

According to this model, mobile banking can be said to consist of three inter-related concepts:

- Mobile accounting
- Mobile brokerage
- Mobile financial information services

Most services in the categories designated accounting and brokerage are transaction-based. The non-transaction-based services of an informational nature are however essential for conducting transactions - for instance, balance inquiries might be needed before committing a money remittance. The accounting and brokerage services are therefore offered invariably in combination with information services. Information services, on the other hand, may be offered as an independent module.

Mobile banking services

Account information, Mini-statements and checking of account history

1. Alerts on account activity or passing of set thresholds
2. Monitoring of term deposits
3. Access to loan statements
4. Access to card statements
5. Mutual funds / equity statements
6. Insurance policy management

Investments

1. Portfolio management services
2. Real-time stock quotes
3. Personalized alerts and notifications on security prices

Future functionalities in mobile banking

Based on the 'International Review of Business Research Papers' from World Business Institute, Australia, the following are the key functional trends possible in world of Mobile Banking. With the advent of technology and increasing use of smartphone and tablet based devices, the use of Mobile Banking functionality would enable customer connect across entire customer life cycle much comprehensively than before. With this scenario, current mobile banking objectives of building relationships, reducing cost, achieving new revenue stream will transform to enable new objectives targeting higher level goals such as building brand of the banking organization. Emerging technology and functionalities would enable to create new ways of lead generation, prospecting as well as developing deep customer relationship and mobile banking world would achieve superior customer experience with bi-directional communications. Among the digital channels, mobile banking is a clear IT investment priority in 2013 as retail banks attempt to capitalise on the features unique to mobile, such as location-based services objective based functionality enrichment In Mobile Banking

- Communication enrichment: - Video Interaction with agents, advisors.
- Pervasive Transactions capabilities: - Comprehensive “Mobile wallet”
- Customer Education: - “Test drive” for demos of banking services
- Connect with new customer segment: - Connect with Gen Y – Gen Z using games and social network ambushed to surrogate bank’s offerings
- Personalization of corporate banking services: - Personalization experience for multiple roles and hierarchies in corporate banking as against the vanilla based segment based enhancements in the current context.

Challenges for a mobile banking solution

Key challenges in developing a sophisticated mobile banking application are :

Handset accessibility

There are a large number of different mobile phone devices and it is a big challenge for banks to offer a mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser, or only SMS. The desire for interoperability is largely dependent on the banks themselves, where installed applications (Java based or native) provide better security are easier to use and allow development of more complex capabilities similar to those of internet banking while SMS can provide the basics but becomes difficult to operate with more complex transactions.

Security

As with most internet-connected devices, as well as mobile-telephony devices, cybercrime rates are escalating year-on-year. The types of cybercrimes which may affect mobile-banking might range from unauthorized use while the owner is using the toilet, to remote-hacking, or even jamming or interference via the internet or telephone network data streams. In the banking world, currency rates may change by the millisecond.

See also: security. Security of financial transactions are being executed from some remote location and transmission of financial information over the air, are the most complicated challenges that need to be addressed jointly by mobile application developers, wireless network service providers and the banks' IT departments.

The following aspects need to be addressed to offer a secure infrastructure for financial transaction over wireless network:

1. Physical part of the hand-held device. If the bank is offering smart-card based security, the physical security of the device is more important.
2. Security of any thick-client application running on the device. In case the device is stolen, the hacker should require at least an ID/Password to access the application.
3. Authentication of the device with service provider before initiating a transaction. This would ensure that unauthorized devices are not connected to perform financial transactions.
4. User ID / Password authentication of bank’s customer.
5. Encryption of the data being transmitted over the air.

6. Encryption of the data that will be stored in device for later / off-line analysis by the customer.

One-time password (OTPs) are the latest tool used by financial and banking service providers in the fight against cyber fraud. Instead of relying on traditional memorized passwords, OTPs are requested by consumers each time they want to perform transactions using the online or mobile banking interface. When the request is received the password is sent to the consumer's phone via SMS. The password is expired once it has been used or once its scheduled life-cycle has expired.

Conclusion

There is a challenge of interoperability between mobile banking applications due to perceived lack of common technology standards for mobile banking. There are a large number of different mobile phone devices and it is a big challenge for banks to offer a mobile banking solution on any type of device. Some of these devices support Java ME and others support SIM Application Toolkit, a WAP browser or only SMS.

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2. DIGITAL INDIA- TRANSITION FROM CASH TO LESS CASH ECONOMY

Dr. A. THILAHA DHARMARAJAN, Asst.Prof in Corporate Secretaryship, Bharathidasan Govt College for Women, Puducherry.

Introduction

Digital India has taken a fast pace after demonetization announced on 8th November, 2016. 'Less-cash' or 'Cashless' has emerged as the new buzzword in the Indian economy. Due to less cash available in the banking system, everyone is searching for cashless mode of payments. Online payments and debit & credit cards payments were the well-known available options for cashless transaction. Demonetization has invalidated approximately Rs 14,180 billion worth of high value currency, which is almost 86 percent of the total currency in circulation (total currency in circulation Rs 16,454 billion as on 31 March 2016). The Centre is making a big push for online and card-based transactions in the country to achieve its target of becoming a largely cashless economy. However, it seems the country is not ready for such an immediate shakeup. When the Prime Minister announced demonetization of 500 and 1000 rupee notes on the night of 8th November 2016, the people in reaction all over the country was stunned. The main object of this move was the curb black money menace. Another motive of the government in demonetization was to create a cashless economy. Nowadays Cashless Transactions have the benefits of transparency i.e. all transactions can be traced and tracked. This helps the government to track payment to terrorist organizations and other anti-national activities. This study focuses on the strategies to achieve the objectives of "Digital India" movement from Cash economy to Less Cash Economy.

Objectives of the Study

1. To identify the ways and means for an inclusive development of technological framework that supports the Less Cash Economy.
2. To deliberate on the opportunities and challenges of Less Cash Economy.
3. To suggest measures to strengthen the smooth transition of Less Cash Economy.

Cash Economy to a Less Cash Economy

A cashless economy runs on credit or debit cards, electronic funds transfer, or online shopping instead of cash. The idea of a cashless economy actually a revolution from the fiat money to digital money, generally adopted with the aim of curbing the flow of black money and increasing transparency of the flow of cash.

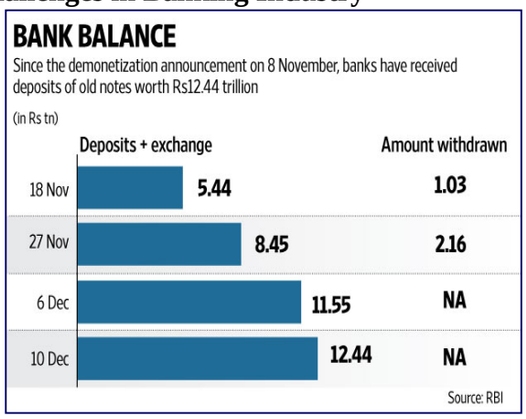
Top Cashless Countries

Countries	Cashless Transactions (in %)
Singapore	61
Netherlands	60
France	59
Sweden	59
Canada	57
Belgium	56
United Kingdom	52
USA	45
Australia	35
Germany	33
South Korea	29
Spain	16
Brazil	15
Japan	14
China	10
India	2

Advantages of Cashless Economy

- **Convenient Mode of Payment**: Reduction in transaction cost of carrying and doing business/ transactions in cash.
- **Discounts**: Waiver of Service Tax on card transactions up to 15% /Rs. 2,000/0.75% discount on digital purchase of fuel/0.5% discount on monthly and seasonal suburban Railway tickets from 1st Jan 2017/5% discounts on digital payments for Railway catering/8% discount on new LIC policies through online.
- **Tracking:** If all transactions are on record, it will be very easy for people to keep track of their spending. It will also help while filing income tax returns and, in case of a scrutiny, people will find it easy to explain their spends,
- **Budget**: The written record will help you keep tabs on your spending and this will result in better budgeting. Various apps and tools will help people analyse their spending patterns and throw up good insights over a couple of years. Controlled spending could also result in higher investing.
- **Lower Risk:** With proper cyber security, online payment is relatively risk-free.
- **Reduction in the Cost of Printing Money**: In 2015, printing currency cost of RBI Rs. 27 billion.
- **Decrease in Crime Rate**: Many anti-social and illegal activities like drug trafficking, prostitution, financing of terrorism, and money laundering are carried out only in cash.
- **Good for the Banking Sector**: A digital economy will help the banking system. Once people get used to digital payment and transfers, there would be less demand for cash holding or cash hoarding.
- **Transparency and Monitoring:** Cashless transactions can be easily monitored by the government. Therefore, tax evasion would be difficult and would enhance revenue collection.

Challenges in Banking Industry



- Alternative forms of payment (cashless transactions) surge in demand.
- Banks are required to strengthen such systems and the infrastructures.
- Banks have been advised to increase the issuance and use of mobile wallets and debit/credit cards.

Challenges of a Cashless Rural Economy

- ✓ **Currency Dominated Economy**: High level of cash circulation/ 13% of India's GDP.
- ✓ **Transaction Mainly in Cash**: 95% in cash transaction and no digital literacy.
- ✓ **ATM Use is Mainly for Cash Withdrawals and not for Settling Online Transactions**: 92% of ATM cards are used for cash withdrawals.
- ✓ **Limited Availability of Point of Sale Terminals**. 44 million POS terminals installed by various banks across locations at the end of July 2016.
- ✓ **Mobile Internet Penetration Remains Weak in Rural India:** For settling transactions digitally, internet connection is needed. BHIM will work on without mobile internet.

Conclusion

Go Less cash/cashless spurred by demonetization, many Indians have made up their minds to become used to the cashless economy. It's very convenient, easy and most importantly safer than the cash exchange. Ultimately, it is not just convenient for the user but also facilitates to keeping nation and national economy accountable. For a citizen of India, there are many ways to go cashless. From meeting daily supplies to running big businesses, these options will surely make our life a lot easier. Let's change ourselves and our society for the better. As Barack Obama said in his farewell speech, "Change only happens when ordinary people get involved, get engaged and come together to demand it".

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3. TRANSACTIONS THROUGH DIGITAL IN SCHOOLS

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Abstract:

The 08th of November 2016 marked a new era in the Indian Economy when the Indian Prime Minister Narendra Modi announced the demonetization of India's 500 and 1,000-rupee notes, which made up 86% of the country's currency. The Indian Government is intending to make cash handling more expensive and digital transaction extremely cheap. This move to decrease the consumer's dependency on cash and promote use of digital transactions makes it imperative for the Banking Industry to strengthen their technology and innovate products that will enhance user experience.

Online Transactions, Mobile Payments, Wire Transfers, e-wallets have already reshaped the entire banking sector and newer technologies are being introduced at a rapid pace. Technology has been disrupting the way businesses function across the globe. It has played a pivotal role in shaping the Indian banking scenario globally. However, with the emergence of ATM's, online transactions, mobile apps, etc. over the last few years the banking industry propelled to a different orbit. Furthermore, the spread of smartphones and extensive availability of 3G and 4G, has accelerated the way banks interact and connect with their customers and by making themselves available anytime and anywhere. Thus, advances in technology have also created newer customer expectations, multi-channel structure, and progressive product offerings. Today, the banking technology is emerging as synonymous with the concept of everyday banking. In this paper, we see the present and future directions of the digital world in financial management. ***Keywords:*** *Demonetization, online transactions.*

Introduction

Internet plays vital role between banks and customers to receive and deliver information, this form of banking is described as Internet banking (Reserve Bank of India, 2001). The process in which internet and computer device are used as a medium to facilitate banking services is termed as internet banking. Internet banking is a web-based service that enables the banks authorized customers to access their account information. It permits the customers to log on to the banks website with the help of bank's issued identification and personal identification number (PIN). The banking system verifies the user and provides access to the requested services, the range of products and service offered by each bank on the internet differs widely in their content. Banks have traditionally been in the forefront of harnessing technology to improve their products, services and efficiency. Banks are using electronic and telecommunication networks for delivering a wide range of value added products and services. The delivery channels include direct dial – up connections, private networks, public networks etc. and the devices include Personal Computers. With the popularity of Network 3G/4G, easy access to Internet and World Wide Web (WWW), Internet is increasingly used by banks as a channel for receiving instructions and delivering their products and services to their customers. Most of the banks offer internet banking as a value-added service.

Digital banking-why?

Digital banking provides numbers of benefits to its customers. It removes the traditional geographical barriers for customers. The customer can access their account anytime and from any part of the world, Due to new innovative and convenient facility it attracts new customers who are using traditional banking system so far, It facilitate the offering of more services because this is internet based services which is time saving and customer can access and regulate his/her account himself/herself, This facility have zero fee, so no monthly payments are required to forfeit for availing this service, Free of charge bill reimbursement and refunds on ATM surcharges, Simple online submissions for personal accounts, loans and credits, Due to self-access system it reduce customer attrition and Increase Customer loyalty, High-tech technical advancements in the form of intrusion detection systems (IDS) to virus control equipment's have made Online Banking system hazard free. However, regardless of the fact it is vital on the part of every customer to undertake few precautionary measures while transacting online. The smart people have already started resorting to these cashless payment options and it is expected that the rest will follow soon.

Source: Prepared by researcher

Due to lack of awareness about people the internet banking cannot growing in faster. After the demonetization people used internet banking is large in numbers. Today in banking sector network plays a vital role. In our country 30 percent of the total population use smartphones. And also due to availability of faster networks like 3G/4G online banking is very easier. The only drawback of digitalization of financial management is lack of awareness among people. Youth is the only key to introduce any new thought for our country to bring success in the Scheme. So our government decided to create awareness in digital payments to young students through educational institutions.

Awareness to educational institution-how?

Our Union Minister for Human resource development, Shri Prakash Javadekar launched **"Vittiya**

Sakshatra Abhiyan (VISAKA)". Our country is undergoing transformational shift towards digital economy and youth should not only witness the change but also proactively participate in it by becoming agents of change. The faculty and young students to create awareness, encourage and motivate all people around them to use a digitally enabled cashless economic system for transfer of fund. The union HRD minister also appealed to higher education institutes to receive nothing in cash (wages/salaries/vendor) and pay nothing in cash(fees/fines/deposits) and develop cashless campus (covering shops/canteens/services). The young students, who can adapt to technology easily and quickly, to educate at home and in their surroundings to create digital financial literacy. The NCC/NSS Volunteers in educational institutions spread awareness about these modes of transactions to shopkeepers, vendors in nearest market place. And also Young students said to their surroundings to that these digital platforms are easy to use, convenient, secure and anytime accessible by anyone anywhere.

University grants commission said that the disbursal of fellowships and scholarships is made through Direct Benefit Transfer (DBT) mode.

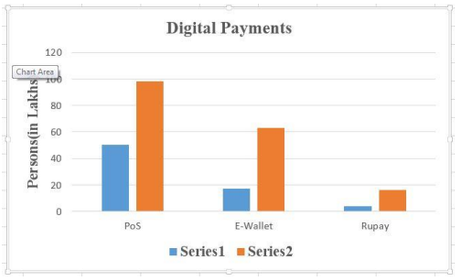
Safety measures of digital payments

With the advancement of technology, the digital payment method growing faster. At the same time, we know the some of the safety measures in digital payments. The safety measures are listed as follows:

- ✓ Use chipped ATM cards on ATMs and point of sale machines (PoS) because scammers can steal your card data through skimmers.
- ✓ Know your debit card PIN and CVV number confidential. Change your ATM pin number at frequently.
- ✓ While using net banking, create strong password and PIN, change them frequently.
- ✓ A password contains long combinations of alphabets, numerical and symbols which cannot be found in dictionaries.
- ✓ Before you install your E-wallet or any financial app store, check its reviews and ratings and be assured that it is a genuine app.
- ✓ Don't transfer money through unsecured portals. Check for the crucial in the 'https' on a portal that you are using.

Status of digital payments (2016-2017)

After demonetization, the status of internet banking is raised large in numbers. Mainly customers used Point on sale method of money transaction using Debit cards. The below bar chart describe the customers using internet banking method between 8th November and 7th December. The blue Column indicates customers using internet banking on 8th November. The Orange Column indicates customers using internet banking on 7thDecember**.** The bar chart clearly describes how the digital payments increase after 8th November.



Data from State Bank of India

For example, a data collected from The Hindu paper dated on 21st December 2016, State Bank of India saw 3.75 lakh transactions every day in the PoS terminals before November 9 amounting to Rs.94 Crore per day. After Demonetization the number increased to 16.43 lakhs transactions amounting to Rs.324 Crore per day, said Rajnish Kumar, Managing Director SBI

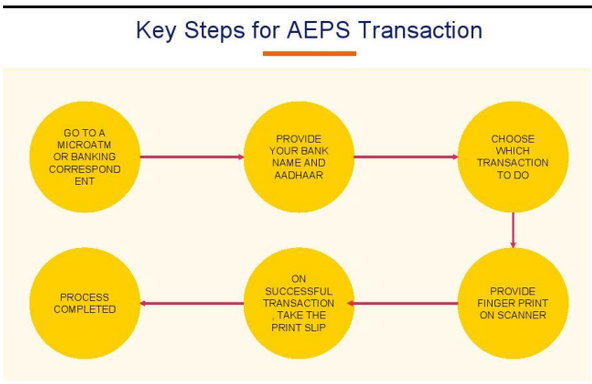
And also he said "The country's cash to Gross domestic product ratio, which is among the highest in the world, was envisioned to be reduced from about 12 percent to 6 percent".

Aadhar enabled payment system (AEPS)

India has billion of persons registered under the unique identification of Aadhar. A new method of online transactions could be introduced by our government is Aadhar Enabled Payment System (AEPS).In the AEPS method of payments, Aadhar payment app immediately tallies your fingerprints with the fingerprints of the given aadhar. If it matches, the system would permit for the transaction. In case of mismatch, the system would not do any transaction.

Ideally Aadhar should be rendered a bank in the cloud. Very simply, the 12-digit identity number can be converted into an account number vested in Aadhar Bank in the cloud. Using the Aadhar number, a person should be able to deposit cash at a bank or post office or a retailer to deposit his cash and the credit gets recorded in his account in Aadhar bank in the cloud. Aadhar is not just an identity number; it can be a financial address of a person and can propel conversion of the cash economy to a less cash economy.

AEPS allows balance enquiry, cash withdrawl, cashdeposit, Aadhar to Aadhar funds transfer. The Aadhar bridge systems allow direct cash transfers of LPG subsidies, pensions, scholarships,State government welfare schemes and can be leveraged to be ready even for,say,transfers like universal basic income.



Conclusion

By 2020, India could make payment cards, ATMs and PoS terminals completely irrelevant as consumers move towards a mobile banking. Although demonetization is spurring a digital revolution, it would be unrealistic picture to an Indian Economy that is completely cashless in just three years. India's smartphone market is rapidly growing which will be essential to push the country towards adopting mobile payments. There are already 350 million smartphone users in the country, with this number expected to grow past 700 million by 2020.A millions of users in India have access to alternative payment methods with their smartphones by 2020.

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4. THE PLUS AND MINUS OF DIGITALISATION IN INDIA.

Mr. K. SRINIVASAN, Ph.D Research Scholar, Madurai Kamaraj Universty

Introduction

The year 2016 was a roller coaster year for India, especially for fine tech start-ups and financial services and digitalization. The innovations in this particular industry shows no sign of slowing down and continues its march of progress to disrupt the traditional banking method and other digitalizing other academic institutions, government departments etc. the investments in fin-tech is almost doubled. This despite the demonetization in Nov., 2016.

Digital India

It launched in July 2015 aims to connect rural areas in the high-speed internet networks and improving digital literacy. The vision is inclusive growth in areas of electronic services, products, manufacturing, education, commercialization, automation, job opportunities etc. and is centered on three key areas of digital infrastructure, governance and services on demand and digital empowerment of citizens/netizens. India is also one of the fastest growing markets for electronics. The government of India has launched the national policy on electronics 2012 with the vision to make India globally competitive destination for electronic system design and manufacturing (esdm). The event would focus on the opportunities for German companies in India's digital India program, ESDM, start-up programs and innovations.

UPI

United payments interface also known as "UPI", launched by National Payment Corporation of India, allows you to make payments digitally, using the mobile phone as the primary device for transactions, through the creation of virtual payment address. The UPI is more or less is "whats app" moment for banking, UPI is the most advanced method of all the digital payments.

The benefit of UPI done through digitally: cheapest way to transfer of funds. If you choose UPI as the mode of transferring funds to any other bank account it will cost, you less than 50 paise per transaction. UPI make all the small transactions feasible. UPI does not require card details for fund transfer. More secure than any other mode of digital payment. In the payment through UPI you never share your bank/card details, hence no one can utilize your bank details for their benefit. Instant transfer of amount, it is based on IMPS [platforms. Hence, you can transfer the amount instantly. Access to multiple accounts through one UPI App.

What is Aadhar – e – KYC?

It is a paperless process where in the identity and addresses of the customers are verified electronically through Aadhar authentication. This can be used as an alternative to current KYC (know your customer) which is done on the basis of physical photocopies of the original documents. Benefit of Aadhar e-kyc in loan disbursement due to physical verification and attestation verification can be brought to a minimum. There by processing and issuance of the digital certificate. Aadhar is now used in multi various ways in India, especially to book train tickets, to get smart ration card, to book flight tickets, to book bus tickets, to buy a 4G mobile through Reliance Jio or any other hand set with sim, to buy an automotive vehicle, to take a life insurance policy etc. to mention a few. Aadhar is common man's right. One must appreciate the work of Sri. Nandan Nilekani, who was the brain behind the Aadhar's invention in India. Mobile verification and e mail verification is not required in the case

of Aadhar e -kyc. Platforms like Rupaiya Exchange have implemented Aadhar based e-kyc service to enable ease of use of financial services and make regulatory process simpler. Rupaiya Exchange is a P2P landing platform, established to benefit both the lenders and borrowers. All the lenders are required to complete their diligence before investing in borrowers.

Digital India is a flagship programme, with a vision to prepare India to transform digitally. The motive is to transform the entire ecosystem of public services through the use of IT. The focus is also on making technology central to enabling change. Digital education/marketing is an umbrella programme covering many academic institutions, government departments etc. the vision of digital India is based on three important factors. They are:

1. Broadband highways.
2. Universal access to mobile connectivity
3. Public internet access programmes.
4. E-Governance- reforming Government through technology
5. E-kranti electronic delivery of services
6. Information for all
7. Electronics manufacturing- target zero imports
8. IT for jobs
9. Early harvest programmes.

E-Governance*:*

Government business process re0engineering using information technology to improve transactions. There will be inter0face between departments for online applications and tracking. There will be use of repositories for example, school and college certificates, voter id cards, etc. the services and other platforms will get integrated UDAI, payment gateway, mobile platform, EDI etc. all data bases will be electronic and not manual. Public grievance redressal will be formed using I.T. to automate, respond, analyse data and resolve persistent problems – largely process improvements. National E-Governance projects comprises of 44 mission mode projects, encompassing to 13 central MMPS, 17 state MPS and 14 integrated MMPS. The MMPS will be owned and spearheaded by various ministries. 100 crore Aadhar cards to be linked to multiple services of the central government. Digital wallet integrated with Deity for payments are to be maintained, connectivity with MYGOV.IN for multiple link access to citizens.

Electronic Delivery of Services: E-Kranti.

A. Technology for education:
   1. All schools connected with broadband
   2. Free wi-fi in all schools
   3. Digital literacy programme
   4. MOOCS- develop massively online
   5. Open courses
   6. Technology for planning
   7. GIS based decision making
   8. Nation GIS mission mode project

B. TECHNOLOGY FOR HEALTH – E-HEALTH CARE.
   1. Online medical consultation
   2. Online medical records
   3. Online medicine supply
   4. Pan India exchange for patient information

C. TECHNOLOGY FOR FARMERS.
   1. Real time price information
   2. Online ordering of inputs
   3. Online case, loan, relief payment with mobile banking

D. E- EDUCATION.

- National Scholarship Portal is integrated with Deity
- INDIA's first MOOCS platform "SWAMYAM" to be launched shortly.
- Narasingpur becomes 2nd village in Telengana to achieve 100 % DIGITAL LITERACY under NDLM SCHEME.
- Indian Regional Navigation Satellite System (IRNSS) launched by GPS TRACKING OF TRAINS.
- APPS for health care and promoting family planning is ANMOL
- Use of Neem coated urea will avoid reduction in use of fertilizers by 20 tonnes in 2018-2019.
- Prime Minister launches C-NAM (National Agriculture Market), 200 mandis will be linked in 5 months by 2018.
- Apps for e price and selling is AGRIMARKET
- Apps for crops insurance information is CROP INSURANCE
- Rural BPO'S will fetch four to five lacs jobs in the coming years.
- Launch of CSID digital portal for tracking payment of VLE's.
- The IT Sector is likely to create around 2.7 lakhs jobs can come in E-Commerce. The organised sector is set to create one billion new jobs in 2016-2017.

Early Harvest programmes:

- IT platform for messages / mass messaging started from July, 2014.
- Government Greetings to be only E-Greetings.
- Biometric attendance- to be completed by 2017.
- Wi-Fi in all Universities
- Secured E mail to be within the government departments
- Mobile platform is available for SMS based weather services, especially for fishermen communities.
- Engagement of Govt' ministries, ministers, department officials through Social Media Network like Twitter, Facebook, Instagram etc.

Information for all in Digital World:

- All citizens to have open easy access to information's. Open data platform and two-way communication between citizens and the government.

- DIGI LOCK for online secured documents.
- INCREDIBLE INDIA APP to assist info by international and domestic tourists for seeking information.
- M-EPF for employers and pensioners MADAD APP for grievances and queries related to VISA and PASSPORTS.

The minus aspects are:

- Spammers across the globe trotting online.
- Tracking the online banking digital transactions.
- Identity thieves are in the large.
- Phishing has become a menace in online transactions.
- Chance of correcting marks in the government exams through spamming and phishing despite strict rules and regulations.
- Digital wallet may get dried suddenly due to DDOS attack of a site by online white collared criminals.

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5. FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

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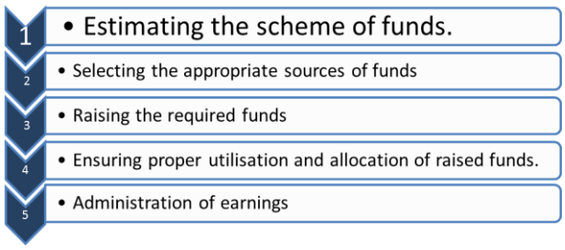
Abstract

The purpose of this paper is to find out the implications of digitization in financial management. It aims to address the impact of financial management in digital world. This paper attempts to provide solutions to the following questions: what is financial management? What is digitalization? So what does it mean to be digital in financial services? Benefits and drawbacks of digital transactions.

What is Financial Management??

- ✓ Financial Management ensures right amount and right type of funds to the business at the right time and at reasonable cost.
- ✓ It is concerned with managing the cash inflows and cash outflows of the company.
- ✓ It may be defined as the art and science of managing money.

Activities of Financial Management?



What is Digitalization?

- ✓ Digitalization is the process of transforming any kind of activity or information into digital formats that can be collected, stored, retrieved, and analyzed electronically.
- ✓ Ultimately, digitalization is all about using digital technologies to transform business models and develop innovative new revenue opportunities.

Context

India's population is over 1.2 billion; 60% of whom are under-banked, whilst 75% have mobile phone access. Around 67% of payments are still made in cash.

Card penetration (debit and credit) is less than 10% and sending money through informal and expensive channels.

Given this context, the country presents a huge opportunity to tackle financial inclusion through the adoption of innovative digital financial services.

Modes of Digitalization

- ➢ Banking cards
- ➢ USSD
- ➢ AEPS
- ➢ UPI
- ➢ Mobile Wallet
- ➢ Banks Prepaid cards
- ➢ Point of sale
- ➢ Internet banking
- ➢ Mobile banking
- ➢ Micro ATMs

Demonetisation to digitization,

Digitalization is the next step after demonetisation. Technology firms and start-ups are coming together to offer the best e-wallet to customers for making online payments, across all categories.

It's a dream of Prime Minister Narendra Modi to make India - a cashless country. And to support and encash this opportunity, all the tech companies have jumped into it.

Challenges at the time of Demonitisation

- Challenge is the demand, which is quite high and how to cater this demand.
- Everyone is flooded with multiple queries and multiple opportunity areas.
- Customers who are first time user should have good experience on the first day itself - either as a merchant or as a customer.
- The whole effort for first time customer is how we educate them in a way without confusing them and giving the right solutions which they really need.

Digitalization in Banking Industry

- The introduction of *digital banking* has revolutionized the banking sector and modified the whole procedure of simple bank transfers.
- It has facilitated the customers assisting them to check their account details, pay *online* bills and transfer money from one account to the other in a faster way.
- This has helped the end user to enjoy a methodical financial life.

Benefits of Online Banking

The digitization of banking has brought the joy of luxurious banking from anywhere, anytime. It has grace our lives with the following advantages:

- ✓ Banking made easier
- ✓ High interest rates
- ✓ Advanced websites
- ✓ Mobility of services:
- ✓ Eco-friendly

Challenges in Banking Industry

- Alternative forms of payment (cashless transactions) surge in demand.
- Banks are required to strengthen such systems and the infrastructures.
- Banks have been advised to increase the issuance and use of mobile wallets and debit/credit cards.

About PMJDY

Pradhan Mantri Jan-Dhan Yojana (PMJDY) is National Mission for Financial Inclusion to ensure access to financial services, namely, Banking/ Savings & Deposit Accounts, Remittance, Credit, Insurance, Pension in an affordable manner.

Digitalization in Health Care

How technology is boosting healthcare in India

Digitalization is aiding the sector to address its traditional challenges and improve the overall efficiency and patient experience.

From using tablets and iPads to access patients' records to using telemedicine to expand reach to rural communities, technology is making inroads into every aspect of healthcare and addressing major challenges.

How technology is boosting healthcare in India

- Doctors and patients can collaborate in real time.
- For instance, an online portal like iCliniq is helping individuals to take advice online or consult doctors round the-clock over the phone and HD video if they have an urgent health concern that requires immediate consultation.
- Similarly, the invention of telemedicine has opened new avenues for rural healthcare.
- Telehealth allows patients to connect with doctors using mobile devices and video chat.
- For example, Apollo Telemedicine Networking Foundation provides telemedicine through transfer of medical information, medical transcription in all forms of audios, videos, motion pictures, still images, graphics.

Disadvantages in health care

- Virtual clinical treatment decreases human interaction among the healthcare professionals and patients that increases the risk of error in clinical services, if the service is delivered by inexperienced professional.
- Moreover, confidential medical information can be leaked through faulty electronic system.
- Low quality of health informatics records, like, X-ray or other images, clinical progress reports, etc. run the risk of faulty clinical treatment.
- *Telemedicine* might take longer time for the difficulties in connecting virtual communication due to low internet speed or server problem. Moreover, this system cannot provide immediate treatment, such as, antibiotics.
- *Telemedicine* system requires tough legal regulation to prevent unauthorized and illegal service providers in this sector.

Digitalization in Insurance

Advantages of insurance going digital

- ✓ Cost advantage
- ✓ Safety net
- ✓ Convenience tops
- ✓ Post-sales service
- ✓ Faster processing

Factors affecting the insurance industry in going digital

- Enhancing customer experience.
- Analytics for Digital Soundness.
- Grasp the Social media wave.

UNORGANIZED SECTOR IN DIGITAL WORLD

Advantages of unorganized sector in digitalization

- Digitalization is gradually enabling the transformation of unorganized sectors in many parts of the globe.
- This is slowly generating a regular income stream for the people working in these sectors.
- Take agriculture for instance, where digital platforms are connecting buyer and seller directly, eliminating the middleman.

Disadvantages of unorganized sector in digitalization

- **Difficult for a non-technical person:** As most of the digital payment modes are based on mobile phone, the internet and cards. These modes are somewhat difficult for non-technical persons such as farmers, workers etc.
- Scattered nature of sector.
- Employers avoid any form of regulation.

So what does it mean to be digital in financial services?

- Financial firms are thinking about investing in digital capabilities as a sustainable solution to meet both compliance and strategic initiatives.
- As traditional revenue streams struggle to remain profitable, firms are turning toward digitization, not only as a means to increase cost-effectiveness and efficiency in operations, but also as a platform to develop additional high-margin products and services.
- Firms on the leading edge of the digitized trend, therefore, have reaped benefits in greater customer insight and reach, higher productivity, and the creation of new business models.

Impact of digitalization

- The entry of DEMONITISATION in India in the year 2016, resulted in, Shortage of Cash-Forced to consume less/consume only basic necessities/postponed the requirements. This hardship was overcome by the usage of digitalization.
- Shortage of lower denomination notes-Created change problem in the cash economy. Digitalization will not pave way for such issues

Benefits of digitalization

- ✓ Cost savings
- ✓ Quicker, easier, more effective or more efficient business processes, including:
  - ➢ Gains in time and productivity
  - ➢ Less space dedicated to physical archives
  - ➢ Lower materials consumption
  - ➢ Higher accuracy due to fewer errors
  - ➢ Enhanced control capability and process analysis
  - ➢ Improved service capabilities to customers

Benefits of digitalization

- ✓ Stronger business information, improved analytics and better process control
- ✓ Automated collection and payment processes through structured electronic document sharing
- ✓ Improved transparency of processes, opening up new credit models
- ✓ Increased overall productivity and competitiveness

Drawbacks of digital transactions

- ✓ *Higher risk of identity theft*
- ✓ *Losing phone*
- ✓ *Difficult for tech-unsavvy*
- ✓ *Overspending*
- ✓ *The risk of data theft*

Challenges to be faced to meet with digital India

- Smartphone affordability for most population of the country.
- Non-Tech Savvy (Need to educate).
- Infrastructure/Phone Battery.
- Internet Blockage. (J & K often face crack down-first internet blocked. Any alternative for payment method?).
- Saving to Spending. (Spending by cards often encourages people to spend more than shopping by cash.)
- Online Banking Ombudsman establishment required. (Grievance redressal)

Conclusions

- Given these variables, digitization is a journey that embraces change; it doesn't happen overnight.
- Evolution requires transformation and standardization across processes, organizational and operating models, and technology.
- The amount of change necessary is significant, and must be coupled with leadership drive, frontline support, and execution. But the benefits are even more significant—in terms of cost savings, added revenue, and long-term agility.

Suggestions

- We need to make the digital world more secure and simple.
- People must be educated on the benefits of the digital world.
- Corporates could also be encouraged for earmarking CSR funds especially for organizing education
- The concern regarding security of data in cashless transactions, which is the biggest challenge needs to be addressed by developing and implementing new technologies and security protocols.
- This will not happen in a day, we need patience and belief in the system and do the best we can.
- So all the best to the Government.

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6. ONLINE TRANSACTION PROCESSING

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Abstract

OLTP system is a popular data processing system in today's enterprises. Some examples of OLTP systems include order entry, retail sales, and financial transaction systems. On line transaction processing system increasingly requires support for transactions that span a network and may include more than one company. For this reason, modern on line transaction processing software use client or server processing and brokering software that allows transactions to run on different computer platforms in a network. In large applications, efficient OLTP may depend on sophisticated transaction management software (such as CICS*) and/or* database *optimization tactics to facilitate the processing of large numbers of concurrent updates to an OLTP-oriented database.*

Introduction

Online transaction processing, or OLTP, is a class of information systems that facilitate and manage transaction-oriented applications, typically for data entry and retrieval transaction processing. The term is somewhat ambiguous; some understand a "transaction" in the context of computer or database transactions, while others (such as the Transaction Processing Performance Council) define it in terms of business or commercial transactions. OLTP has also been used to refer to processing in which the system responds immediately to user requests. An automated teller machine (ATM) for a bank is an example of a commercial transaction processing application.. The key goals of OLTP applications are availability, speed, concurrency and recoverability. Reduced paper trails and the faster, more accurate forecast for revenues and expenses are both examples of how OLTP makes things simpler for businesses. However, like many modern online information technology solutions, some systems require offline maintenance, which further affects the cost–benefit analysis of on line transaction processing system.

Meaning of OLTP

OLTP (online transaction processing) is a class of software programs capable of supporting transaction-oriented applications on the Internet. Typically, OLTP systems are used for order entry, financial transactions, customer relationship management (CRM) and retail sales. Such systems have a large number of users who conduct short transactions. Database queries are usually simple, require sub-second response times and return relatively few records. Online processing systems are used all over the internet nowadays. Small to enterprise web based and desktop applications use online processing for their customers. For example, when we purchase something on internet then it is handled by online processing systems.

Advantages of online processing systems

- Easy to use to do shopping online
- These systems have quick response time
- It is easy to use just form filling and your job get processed automatically by web and database servers
- Online banks nowadays use online processing systems for money transactions
- Usage of credit cards is also handled by these systems

Disadvantages of online processing systems

- There occur millions of requests to banks at a time which is difficult to handle
- If any hardware failure occurs in online processing systems, then visitors of website get in trouble and online transaction get stopped and effected
- Electricity problem is another issue i.e. if electric supply gets off so backup of generators and hardware devices in better
- Online processing involves lot of staff to maintain inventory
- There should be make some relation with banks so if any transaction problem occurs then banks handle it correctly
- Transferring products to people physically is also another problem

- Some issue also gets involved during creation of new accounts by

RuPay Card

RuPay is an Indian domestic card scheme conceived and launched by the National Payments Corporation of India (NPCI)] It was created to fulfil the Reserve Bank of India's desire to have a domestic, open loop, and multilateral system of payments in India. RuPay facilitates electronic payment at all Indian banks and financial institutions.] NPCI maintains ties with Discover Financial to enable the card scheme to gain international acceptance. The RuPay card was launched on 26 March 2012.

Benefits of using RuPay Card

Lower transaction cost – International transactions lead to higher transaction costs. Such costs can be reduced by using RuPay card since processing will be done within the country. Also, transactions will be faster. SMS alerts – Users will get alerts for every transaction made through this card. Reduced processing fees – Processing fees for RuPay card compared with regular debit/credit cards will be considerably lower.

Advantages of using RuPay Card

- ❖ It's easily accessible to all. Even people from rural areas can avail this services.
- ❖ As all processing happens within India there is no clearance cost incurred.
- ❖ It functions on the PIN authorization hence ensuring security for the users.
- ❖ By launching RuPay card India will be less dependent on International debit/credit cards.
- ❖ The card users can also get SMS alerts that help you know the balance as well as the cash withdrawn from account.

Conclusion

Online processing systems are used all over the internet nowadays. Small to enterprise web based and desktop applications use online processing for their customers. For example, when we purchase something on internet then it is handled by online processing systems. It is easy to use just form filling and your job get processed automatically by web and database servers. You can access anything worldwide online and purchase it on the spot by bank wire transfer, credit cards, and online banks. All these systems are handled by online processing. So online transaction processing is very useful to us.

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7. FINANCIAL MANAGEMENT IN DIGITAL WORLD

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Abstract

In the world of advanced technology, schools and colleges have emerged at giving a value education through digital classes and in no doubt finance play an important role. Financial management in education applies both at the level of an education authority and at the level of individual schools and colleges; it must therefore include the mechanisms through which the education authority allocates funds and resources to individual institutions. It is an integral part of general educational management which embraces curriculum, staffing and timetable decisions, all of which relate directly to the essential function of the educational institution, and also essential non-instructional activities.

Education in Digital World

Education for digital world contains comprehensive collections of proven strategies and tools for effective online teaching, based on the principles of learning as a social process. It offers practical, contemporary guidance to support e-learning decision-making, instructional choices, as well as program and course planning, and development."Practical advice, real-life examples, case studies, and useful resources supply in- depth perspectives about structuring and fostering socially engaging learning in an online environment. A plethora of e-learning topics provide insights, ideas, and usable tools. Tips and evidence-based theory guide administrators, program and course developers, project teams, and teachers through the development of online learning opportunities. "Education for a digital world is an indispensable guide, resource, text book and manual for policymakers and practitioners in developing and developed countries".

Financial Management in the Digital World

All public sector organizations, including education authorities (or school boards) have similar requirements to business organizations to publish accounts of

their use of public funds and to conduct audits. They will also have to draw up their budgets for educational expenditure according to quite strict rules, in particular where they are subject to formula funding.

Levacic Theory

According to Levacic, budgets for schools and colleges will be derived from the education authority's planning of its educational provision, and are also used as instrument for decentralized control of schools and colleges. He referring to the situation in the UK under the Education Reform Act 1988, by which each Local Education Authority [LEA] is required to delegate budgetary control to individual schools and colleges, goes on to give a detailed exposition of how financial management in education differs from that in the commercial word. The familiar activities of hiring staff, timetabling and allocating capitation moneys or all part of real resources they acquire and how they deploy and develop them. Education managers do not need qualifications in accountancy; rather they need to make common sense applications for a few key techniques and approaches, suitably adapted from the practice of management accountancy in other kinds of organization. The practical meaning of the term will vary in different educational systems, depending on the degree of financial autonomy granted to the education authority, and by the educational authority to individual schools and colleges. Obvious examples would be the references above to managing monetary assets, capital expenditure and debt provision, responsibility for which is usually not delegated to individual institutions, although it may be: in the United Kingdom, for example, "Grant-Maintained" schools now have some powers to manage and invest funds.

Financial Management Initiative

In the UK, the Thatcher Government's Financial Management Initiative [FMI] launched in 1982, emphasized three key areas of public sector management information systems. The 1988 Education Reform Act extended FMI to schools and colleges, each institution being giving responsibility for and control over its balanced each year. Financial management thus became a main responsibility of school heads and college principals. The reference above to a measure of decentralization of financial management control over educational resources in the UK has been matched by similar decentralization measures in other countries. Most countries have, alongside their public service education system, private schools or colleges and that the latter may have to fulfill certain additional financial management functions such as control of their own assets and investments-depending on the terms of their founding trust or constitution or ownership (such as by a religious authority)-and in this sense may be said to occupy an intermediate position between the world of business and commerce on the one hand and that of non-profit making public service education on the other.

Financial goals and activities

Two American authorities such as Dembowski and Davey, 1986 take financial management to be synonymous with cash management, state the three major financial goals as:

- Availability: To ensure cash availability (liquidity) to meet daily needs and to increase cash available for investment purposes.
- Yield: To earn the maximum return on cash invested.
- Safety: To protect the assets of the school district against loss.
- The same write specify cash, management as being concerned with four activities:
- The conversation of accounts receivable to cash receipts
- The conversion of accounts payable to cash disbursement
- The rate at which cash disbursements clear the bank and
- Maximum the utilization of cash.

Characteristics of Financial Management

The way financial management operates in practice will depends on the organizational and other aspects of the local education system.

The secondary role of educational authorities in major decisions on educational finance. The Ministry of Finance typically has the upper hand in determining educational finance. It is the Ministry of Finance that is responsible for the provision of the required funds for the development of education and the balance in the appropriateness for education and other services and sectors is decided outside the Ministry of Education. Further, the position of the Ministry of Education is often relatively weakened by a failure to specify objectives or to base demands on sound or scientific arguments.

The high degree of centralization in the management of educational finance. The central education authority, which alone has details of sources of finance, draws up estimates of educational expenditure and largely determines allocations by level, by sector, and even by certain items in the budget, the freedom left to local authorities being quite limited. In recent years countries have tended to move towards the decentralization of financial and accounting functions but the central authority invariably retains the power to levy taxes or secure resources.

Lags in the flow of money to users in the educational field. This characteristic is a concomitant of centralization and continues even when central governments have delegated spending power to local authorities, due to the distance of these authorities from their schools.

Poor relations between the management side of educational finance and the technical aspects of education. El-Ghannam describes this as the most serious problem faced by educational administration, namely the divorce of the

world of finance from the world of instruction: the former he depicts as being in the hands of a specialist in finance, the responsibility of an education graduate who, until recently at least, has had little or no interest in educational finance. The two rarely meet in any meaningful sense and typically do not understand each other's point of view.

The concern with financial inputs rather than with their relation to educational outputs. The financial man being overly concerned with financial inputs to the neglect of their relation to educational outputs.

The domination of traditionalism and rigid formalism in the management of educational finance. The management of educational finance tends to be traditional, using traditional budgeting, control and accounting systems and methods of classification and leading to misuse of financial resources.

The lack of efficient administrative personnel. Little preparation, if any is given to educational administrators, who may be ill-prepared for such work and may know little about education.

El-Ghannam was writing with reference to Arab countries, and his paper was dated some twenty years ago, but it can scarcely be doubted that his comments have wide international applicability and although some of his points can now be updated, they are largely still relevant today, twenty years later

8. FINACIAL MANAGEMENT IN THE DIGITAL WORLD

R. SUBANGI, Asst. Prof. in English, Krishnasamy college of Science, Arts & Management for Women

Abstract*:*

Drawing on a wealth of theoretical and empirical work, Education in a Digital World tackles a number of pressing questions, such as, how are global trends in educational technology refracted through national policies and processes? How exactly are educational technologies linked to issues of global economics and the fortunes of national and international economies? To what extent are digital technologies implicated in the commercialization, marketization and commodification of education? Written in a detailed but accessible manner, this is an essential book for anyone wishing to gain a better understanding of the role of education and technology in contemporary globalized society.

Introduction

From cloud computing and robotics to analytics, artificial intelligence and automation, a new class of digital disruptors is transforming how business gets done. Expect these disruptors to have a big impact on the future of finance organizations, says research from Deloitte, which explores the potential impact of new technologies and the possible future of finance in the face of these developments.

No matter what future executives see ahead for their finance organizations, one thing is sure. If business leaders in the organization are going to compete in the digital world, they will need to process more information more efficiently and turn that information into deeper insights faster than ever. It will likely require new technology—and a group of people who are curious and skilled in using it.

Digital Tools for CFOs

Some of the new digital tools available to finance focus specifically on updating core systems and existing capabilities. Other tools, "exponentials," are designed to deliver new and different capabilities. Together, they form a toolset finance can use to improve its own performance and serve the business more effectively, especially when they are used together. Deloitte's research suggests that seven technologies have growing interaction and relevance for how the work of finance get done.

Cloud computing

Cloud is a kind of computing that uses scalable, elastic technology to deliver services over the internet. Instead of making large investments up front, finance can get the full stack of finance functionality "as-a-service," delivered through public, private or hybrid clouds.

Robotics Automates

Process robotics automates transaction processing and communication across multiple technology systems. Robots perform recurring processes just like humans, but with less risk of errors and fatigue.

Visualization

Visualization refers to the innovative use of images and interactive technology to explore large, high-density data sets. Visualization suites complement business intelligence and analytics platforms, offering rich graphics, interactivity and usability on par with leading consumer experiences.

Advanced analytics are the new techniques helping business people tackle the crunchy questions with insightful answers. Often that means combing through big data to see patterns that suggest future opportunities.

Cognitive computing and artificial intelligence simulate human thinking. This technology includes machine learning, natural language processing, speech recognition and computer vision.

In-memory computing refers to storing data in main memory to get faster response times. And because the data is compressed, storage requirements are reduced. The result? Speed and access to quantities of data that were previously unimaginable.

Blockchain

Blockchain is a digital distributed ledger, where transactions are verified and securely stored on a network of

distributed and connected nodes, without a governing central authority.

Talent Essentials for Digital Transformation

The growth of digital business is already reshaping the talent marketplace, far beyond finance. As organizations seek to upgrade their workforces in all areas, they are placing a premium on people with relationship and analytical skills, who can also understand the business. Talent essentials for digital transformation includes:

- —Leadership: A sharp view into the future and a clear roadmap for getting there
- —Culture: Less predictability, more experimentation and innovation
- —New skills: Technology savviness combined with business understanding
- —Engagement: An opportunity to learn, grow and innovate for digital natives or Millennials

Framing the Future

Which path makes sense for CFOs and their organizations? What kind of roadmap will they need to realize the benefits of digital transformation? In the end, organizations will need to chart their own courses. But no matter which future is envisioned, the leaders will likely be those who figure out how to make digital work for finance—and for the whole business, too.

A Few Abstracts

LEARNING AND TEACHING IN THE DIGITAL WORLD

1. S. RUPAPRIYA, & R. MAHALAKSHMI, B.A. II – Year (Eng)
Krishnasamy College of Science and Arts Management for Women, Cuddalore

Digital world consists of all modern equipment like Lap tops, internet etc., We get each and every information very soon only because of this digital system. “Learning and Teaching in the Digital World” is one of the most famous upcoming fashion in this 21st century. In today s context, everything is digitalized even for paying electric bills, booking gas cylinders, shopping, banking is all happening through online that is digitalization. Not only these things the most important aspect “education” is also through digitalization. Now a day’s people love to learn through the modern communications. They learn more things through digital equipment. Even now a day in every schools and college they use Smart class boards and they study very elaborately they are also eligible of doing and knowing things. They learn practically and they enjoy to learn more. Students are able to observe and they can always keep it in their mind. Puzzle type learning process are the best way to learn. Teaching through digital is one of the most excellent way. Advance in technology information and communication have changed the way of learning and teaching are carried out, getting information from the internet is filling a cup from a waterfall. Thus, in this presentation explains about Learning and Teaching in Digital World.

2. V. SUDARMATHI & P. TAMIL SELVI, M.A. I- Year (Eng)
Krishnasamy College of Science and Arts Management for Women, Cuddalore

Today “education has become digital”, in the sense that technology is being used extensively in order to gain knowledge. “Learning and teaching in the digital world” is driven by schools and colleges. The students and teaches using mobiles, laptop, smart phone, tablet are most important technology in digital world. The technology enhanced resources commonly used to support teaching and learning. Fundamental skills attitudes and approaches that educators require to make effective in personal and professional in varied educational contexts. In future, “Learning and teaching in the digital world” modulate the classroom as meeting room in which student can exchange their idea and learn together.

3. R. ARTHI & J. GAJALAKSHMI M.A. I- Year (Eng)
Krishnasamy College of Science and Arts Management for Women, Cuddalore

There are several enduring features of “Education in the Digital World”. Digital technologies are everywhere and they`re bringing many exciting opportunities for our schools, impacting what, where and how education is delivered. In this conceptual paper, I evaluate the potential of such claims, theorizing about “Learning and teaching in the Digital World”. The Digital environment is transforming teaching and learning in schools and colleges. In order to educate in the 21`st century, teachers and administrators need to cultivate and maintain the student`s interest in the material by showing how this knowledge applies in the real world. The highly connected, interdependent education system that equips students with the skill for the future, fosters student’s identity, language and culture and prepares students to participant as successful citizens in the 21`st Century.

EDUCATIONAL MANAGEMENT IN DIGITAL WORLD

4. S. SUBASHINI & V. VANMATHI, M.A. I- Year (Eng)
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In our educational system digital management play an important role. There is a lot of importance given to making of digital gadgets and smart phones within India. Through this program by 2020 we want to achieve zero imports. Therefore, exports will be equal to Imports. The flexibility and accessibility that online learning provide tents to attract students who are searching for ways to fit school in their busy lives. Educational Management is both a field of academic study and a collective group of professionals that includes principals, teachers and other education professionals.

FINANCIAL MANAGEMENT IN THE DIGITAL WORLD

5. M.KALAIVANI & V. VIJAYA M.A. I- Year (Eng)
Krishnasamy College of Science and Arts Management for Women, Cuddalore

In the digital world, people gain knowledge through electronic- devices makes education boundary- less, flaw- less and pleasurable. One can understand the significance of digital mode of transaction in the educational institutions to manage the financial resources efficiently and effectively. Some of the new digital tools available to finance focus specifically on updating, for accounting, financial reporting, risk management and other functions. Today chief financial officers taking on much broader roles as their companies adapt to an increasingly digital world. The announcement of PM Narendra Modi in India (2016) about demonetisation of Indian currency focus towards digitalisation of Indian monetary system through digital mode of fund transfer to all aspect of transaction.

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