Current Perspectives on Education

**Papers Presented in the Seminars on Education Conducted by
Jayanthi College of Education, Tiruppur 641 605 Tamilnadu, India**

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Contents

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   3

Editors' Note

Jayanthi College of Education, Tiruppur, Tamilnadu, India organized two seminars in 2012 on various themes in which scholars from all over India participated and presented their valuable research and observations for further discussion.

The papers presented in the seminars are published in two volumes, with the title *Current Perspectives on Education*. This is the First Volume. We hope to publish the second volume by March 2013.

Our grateful thanks are due to all the participants of both the seminars as well as the Consultant-Professors from various University and College Department of Education.

In this First Volume, 29 papers are included. These cover a wide variety of issues in the fields of educational research and training. Use of modern technologies in Indian classrooms has received special attention. Focus was on how to impart skills to first generation learners from rural areas. Education for All occupied an important part in the discussions. Women's education was also earnestly discussed in the papers presented in the seminars. In addition, a notable feature was the added focus on disability and disabled students. The consensus of the seminars was that theoretical knowledge was not adequate; we need to apply the models in a manner that is suitable to Indian conditions.

We are glad to present the First Volume now. This will be followed by the second volume. We hope the papers presented here are useful to teachers and managers of education.

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Modern Technologies in Colleges of Education

K. Anandan, Ph.D.

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Abstract

The Modern technologies in teaching apparently facilitate both the effort of the teacher as well as the learner. Institutions of higher learning are presumably supposed to be the benefactors of most ICT facilities. For instance institutes of education, faculties of education, colleges of education and other teacher producing institutions, stand the chance of utilizing these facilities fully for instructional purposes. This presupposes that prospective teachers should benefit from these facilities so as to enable them use the facilities in classroom instruction.

Introduction

Modern Technologies offer tremendous possibilities in enhancing students' learning, developing teachers' professional capability and strengthening institutional capacity. It enables opportunities for educators to enhance the quality and accessibility of their Instructional material. The society is highly networked to create knowledge-intensive environment to efficiently create, share, use and protect knowledge. Educational Institutions are gearing up to provide information networks to students with access to digital resources. It is a powerful tool for problem-solving, conceptual development critical thinking and evaluation which help to make the learning process much easier for the students. To be effective in the Classroom Instruction, Teachers should acquire the knowledge and skills to adapt to the new electronic technological tools like Computer Assisted Instruction (CAI), On-line Learning, Virtual Learning, e-Learning, m-Learning, Blogs, Podcasting, Videoconferencing etc. which are student-centered, collaborative, engaging, authentic, self-directed and based on the development of higher order thinking skills with respect to handling classes for students which aims to achieve high academic standards.

Various Modern Technologies

The following are the various modern technologies that can be used for teaching learning process which could be more effective.

- With Computer Aided Instruction (CAI) applications, for example, it is possible to individualize learning while giving immediate reinforcement and feedback
- Computers are multimedia tools and can therefore integrate graphic, print, audio and video into interesting and captivating computer-based instructional units, lessons, and leaning environments
- Computer Managed Instruction (CMI) technology utilises the computer's branching, storage and retrieval capabilities to organise instruction and track students' progress.
- Education Management Information Systems (EMIS) can improve individual school administration as well as nation-wide management of all schools and educational facilities.
- Computer Mediated Communication (CMC) technologies (such as instant messaging, electronic mail, bulletin boards and computer conferencing) facilitate communication among students, teachers, researchers and other individuals of similar interest.

Modern Technologies in Teaching – Learning Process

Modern Technologies enabled teaching-learning encompasses a variety of techniques, tools, content and resources aimed at improving the quality and efficiency of the teaching-learning process. Ranging from projecting media to support a lesson, to multimedia self-learning modules, to simulations to virtual learning environments, there are a variety of options available to the teacher to utilise various modes/modern technological tools for effective pedagogy. Each such device or strategy also involves changes in the classroom environment, understanding of which has a bearing on its effectiveness. Availability of a wide range of such teaching learning materials will catalyze transformation of classrooms into SMART classrooms.

All teachers, all of whom would have acquired a basic competency to handle these resources, will be encouraged to adopt Modern Technology enabled practices in teaching learning. A wide range of appropriate software applications, digital content, tools and resources will be made available through the proposed digital repositories. Teachers will participate in selection and critical evaluation of digital content and resources. They will also be encouraged to develop their own digital resources, sharing them with colleagues

7

through the digital repositories. In schools equipped with EDUSAT terminals, DTH or other media devices, relevant activities will be planned and incorporated into the time schedule of the school. Initially the teachers may use the Computer lab for teaching-learning but progressively more classrooms will be equipped with appropriate ICTs, making way for SMART classes.

Benefits of Modern Technology in Classroom Instruction

There are enormous benefits from the usage of Technology in Classroom Instruction. The benefits of this technological feature in Classroom Instruction are summarized below.

- Improves efficiency both in teaching and learning
- Increases motivation
- Paves way for Personality Development
- Active Participation of students
- Self-paced Learning
- Very flexible and rich medium for students to access the information
- Better learning, Retention and Students' performance
- Multisensory Learning experience

Thus Modern technology has enormous potentiality to deliver many numbers of benefits to the learners. Unless we use electronic technology one cannot obtain up-to-date information to face the competitive world. Using modern technology is the need of the hour and essential part of the life of every individual who wish to enrich his life.

Integrate Modern Technologies in Classroom Instruction

Teachers are encouraged to experiment and adopt a variety of innovative learner-centred, pedagogical teaching and learning approaches, in order to evolve alternatives to the traditional methods of lecture. The effective and efficient use of technology depends on technically competent educators/teachers. They should be able to appreciate the potentiality of these technologies and have positive attitude. To implement Technology based learning in the Colleges of Education so as the student-teachers while they become teachers in school would be able to utilize Technological tools in Classroom Instruction in promoting Flexible Learning Environment to meet individual learning objectives of the subject matter content.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   8

The Four phases are there to integrate electronic technology in classroom instruction as given below

I. Developing Information and Communication Technology (ICT) literacy

II. Effective and Efficient use of Hardware and Software for teaching learning activities

III. Technology based environment, on-line support, networking and management and

IV. Adopt best innovative practices in the use of technological approach

If an Institution or individual follows the above phases to integrate electronic technology, definitely one can acquire the maximum benefits in learning. If a teacher integrates the technology in teaching, it will help the teacher to discharge the duty effectively.

Conclusion

The full benefit of this technology in the educational process is realized only by enhancing the technology skill of faculty and students, ensuring adequate system support and providing funds necessary to build a new academic framework around the new resources. The teachers and students must work together to enhance the level of utilization of electronic technology in teaching -learning and interaction among the learner community.

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References

- Anandan, K. (1997). Multimedia Computer in Education, The New Frontier Education, Vol.XXVII, No.3, July-September, 1997.
- Anandan, K. (2005). Web Technology in Open and Distance Learning System, Vol.12, No.14, April 2005, pp 8-10.
- Manas, R.P. (2010). ICT- Enabled Teacher Education: A Challenge, University News, 48 (20) May 17-23, pp 19-24.
- Trotter Andrews, Preparing Teachers for the Digital Age. Technology Counts 99.
- Panch. Ramalingam, Education and Information Technology.
- www.blogger.com
- www.teahersteachingteachers.org
- www.eric.edu.org

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Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   10

Multimedia - A Panacea for Language Teaching

A. R. Bhavana, Ph.D.

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Introduction

English Language Teaching in India has traversed a long course since pre independence. Yet the scenario in the teaching/ learning activities has not seen much of change and language teachers follow the traditional chalk and talk method. The advent of ICT and digital media has not been very influential in creating a revolution in language teaching methodologies. In the present scenario there is a dire need for a broader focus. Selection procedures like group discussions, brainstorming sessions, telephonic interviews and video conferencing make huge demands on the communicative ability of students during their career seeking endeavor. The goal of learners today is no longer to pass examinations but to use language for daily communication and interaction and their acquisition is now measured in terms of their ability to communicate rather than on examining their accuracy in using certain grammatical features. Media tools appeal to students' senses and help them process information easily. The emergence of multimedia tools can be exploited by language teachers for improving the communicative competence of their students. Apart from experimenting new teaching methods, teachers can apply modern technology to support teaching of language and linguistic skills. The tools include a network of computers and related software, VCRs, cassette players, and slide projectors linked together.

Attitude of Teachers

While language teaching with multimedia has been heralded by several experts and academicians, the contribution of multimedia in supporting language learning is not widespread due to the limitations and restrictions of learning styles, teaching approaches, and computer skills among teachers. Many language teachers do not feel confident operating computers and feel that they need technical assistance during the lesson. In addition, they feel that those technical hassles happen too often leading to frustration.

However students prefer and respond more favorably to visual stimuli than mere traditional teaching methods.

Using multimedia for teaching language can ensure the advantages of authenticity, interactivity, various accessible resources, and combinations of pictures, sound and text. These modern tools will help us to fulfill our tasks effectively, and "create a new dimension for language learning and teaching as well as an additional literacy" (Schrum & Glisan, 2000, p. 325) only when teachers and students are in the right position to exploit them. Therefore, teachers should consider the following factors when using multimedia tools in order to fulfill their teaching goals: the type of skills be presented; student and teacher preferences and teaching styles; the availability of software and hardware; the physical circumstances of the classroom lab; and the type of video materials.

Computer Assisted Instruction

The language teacher can make use of an instructional package for the slow learners and the socially disadvantaged and motivate the learning of English with the aid of a multimedia computer lab. Students can initially be made to recognize linguistic structures and learn pronunciation easily. The primary purpose of this type of computer package will be to give instructions and place the responsibility of learning on the users and constantly monitor them to see that they achieve the goal.

Learners and the Package

There are three domains of educational activities: *Cognitive*: mental skills (*Knowledge*), *Affective*: growth in feelings or emotional areas (*Attitude*) and *Psychomotor*: manual or physical skills (*Skills*) (Benjamin Bloom 1956). Teachers often refer to these three domains as KSA (Knowledge, Skills, and Attitude). This taxonomy of learning behaviors can be thought of as "the goals of the training process." After the training session, the learner should have acquired skills, knowledge, and attitudes. The caliber of students in any class is varied. So in every language class there will be a group of students who are slow in picking up the LSRW skills. The reason for the slow pickup may result from social, economic and psychological factors. Lack of motivation is the main cause of learners' apathy towards learning English as a second language. Anxieties, fear, lack of privacy serve as de motivating factors in the classroom. The big advantage of using the computer is that it

gives the learners more confidence and freedom to manipulate the learning program with privacy.

With the above mentioned facts as point of reference a package can be designed to enable the students to gain footing in the basics of grammar and improve their **Listening, Reading, Writing and Spoken** skills. Prominence has to be given to the first three skills because slow learners gather emotive confidence to speak only if they are able to write correctly without grammatical errors. The tasks should use short stories and passages from literary texts for listening practice, and reading comprehension. The package should also enable students to sharpen their listening skills. The students and instructors need not have to meet at the same time, as the content can be stored in the computer or a CD. Each student can practice numerous times till they are able to do the tasks without mistakes.

The teacher in this computer assisted activity is a facilitator who provides guidance to the students for using the package. The learners can be given some passages to read. Following each text, some multiple choice questions will appear on the screen and the learners will then be required to select the best choice in accordance with the ideas given in the passage. In this task, the only thing the learners have to do, as far as the computer accessories are concerned, is to use the mouse. However, in more advanced language activities, the learners can be asked to type answers to the questions. In other cases, learners may be asked to copy the original text on a new file and prepare answers.

Limitations

When the task becomes cumbersome, there is a natural tendency among learners to get tired or bored, and succumb to any attractive distractions, which may result in demotivation. Therefore, there should be a motivational repertoire that includes several motivation maintenance strategies. There are two most important of these strategies: (a) increasing learners' self-confidence; (b) creating learner autonomy.

Conclusion

Since the goal of Language Teaching (English) is to help students to communicate fluently in the target language, teachers should focus not only on linguistic benefits, but also on other benefits. A good teacher-student rapport and pleasant and supportive atmosphere is also essential. A Computer gives the learners an opportunity to check their spelling, grammatical, and comprehension problems in privacy. Ultimately, the success or failure of language learning/ teaching using multimedia tools can hardly be decided by the media themselves, but by other determinants like teachers' creativity and adaptability, students' language ability, the curriculum and the teaching goals as well.

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References

Asian EFL Journal:English Language Teaching and Research Articles-Vol 4 May 2005 (Brown, 2001: 146). (See Warschauer and Healey, 1998).

Brown, D. (2001). *Teaching by Principles: An Interactive Approach to Language Pedagogy* (2nd edition). Addison Wesely Longman, Inc.

Bloom B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain.* New York: David McKay Co Inc.

Cook, G. (2003). *Applied Linguistics*. Oxford University Press.

The Contribution of Multimedia Tools to EFL Settings Unfamiliar with Technology- Vu Thi Phuong Thao Hanoi University of Foreign Studies, Vietnam Asian EFL Journal: English Language Teaching and Research Articles-september 2003.

Nunan, D. 1989. *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.

Schrum, J. L. & Glisan, E. W. (2000). Teacher's handbook: Contextualized language instruction. (2nd ed.) Boston, MA: Heinle and Heinle. Schrum, J. L. & Glisan, E. W. (2000). Teacher's Handbook: Contextualized languge instruction. (2nd ed.) Boston, MA: Heinle and Heinle.

Warschauer, M. and Healey, D. (1998). Computers and Language Learning: An Overview. *Language Teaching* 31: 57-71.

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Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   15

Legal Regime on Inclusive Education: National and Transnational Legal Mechanism for the Development of Comprehensive Education

J. Devakumar, Ph.D.

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Special Needs and Equality

Any child may experience a special need during the course of educational years. Some children feel 'left-outs' and never enter school or enter only for a few years and, as repeaters, become 'drop-outs' or, more correctly 'pushed-outs', without their needs having been met. These children are a vivid illustration of the failure of schools to teach rather than the pupils' failure to learn. A school system emphasizing Education for All should ensure the right of all children to a meaningful education based on individual needs and abilities. It was recognized by the government that people with disabilities have the same right to education as other citizens but the needs of a nation grappling with a myriad problems, poverty and sheer survival needs of its people made it difficult to sustain focus on the development of services for disabilities.

State's Responsibility

The Constitution of India does not explicitly include children with disabilities in the provisions made for education, but Article 41 does mention people with disabilities and says in part "the State shall within the limits of its economic development make effective provisions for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness, disablement and in other cases of undesired want". It does not mandate the free and compulsory education as a fundamental right and is merely a directive principle to guide state policy but Article 45 does rectify this by stating that free and compulsory education should be provided for ALL children until they complete the age offourteen" The ALL is never specifically explained.

The Role of Regular Schools to Provide Special Education

The regular schools will now increasingly play a major role in making provision for children with special educational needs available nation-wide. Making the school system flexible and adopting an inclusive approach may be the amicable solution to empower the neglected children. In this paper an attempt has been made to explain the present condition of the neglected children. There are many number of National and Transnational conventions and laws implemented, it is to analyse whether these constitutional developments brought those children and changed their societal care.

Uniqueness of Every Child

Every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning, every child has unique characteristics, interests, abilities and learning needs, education systems should be designed and educational programmes implemented to take into account the wide diversity of these characteristics and needs, those with special educational needs must have access to regular schools which should accommodate them within a child centred pedagogy capable of meeting these needs, regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.

Salamanca Statement (http://www.csie.org.uk/inclusion/unesco-salamanca.shtml)

Salamanca Statement called upon all governments and urge them to: give the highest policy and budgetary priority to improve their education systems to enable them to include all children regard lessor f individual differences or difficulties, adopt as a matter of law or policy the principle of inclusive education, enrolling all children in regular schools, unless there are compelling reasons for doing otherwise, to develop demonstration projects and encourage exchanges with countries having experience with inclusive schools, it should establish decentralized and participatory mechanisms for planning, monitoring and

evaluating educational provision for children and adults with special education needs, encourage and facilitate the participation of parents, communities and organization of persons with disabilities in the planning and decision making processes concerning provision for special educational needs, invest greater effort in early identification and intervention strategies, as well as in vocational aspects of inclusive education, ensure that, in the context of a systemic change, teacher education programmes, both preserve and in service, address the provision of special needs education in inclusive schools.

What Shall be the Nature of Inclusive Education?

Inclusive education must respond to all pupils as individuals, recognizing individuality as something to be appreciated and respected. Inclusive education responding to special needs will thus have positive returns for all pupils. • All children and young people of the world, with their individual strengths and weaknesses, with their hopes and expectations, have the right to education. It is not our education systems that have a right to a certain type of children. Therefore, it is the school system of a country that must be adjusted to meet the needs of all its children. That is a big and difficult task, but "where there is a will there is a way!

"A dominant problem in the disability field is the lack of access to education for both children and adults with disabilities. As education is a fundamental right for all, enshrined in the Universal Declaration of Human Rights, and protected through various international conventions, this is a very serious problem. In a majority of countries, there is a dramatic difference in the educational opportunities provided for disabled children and those provided for non-disabled children. It will simply not be possible to realize the goal of Education for All if we do not achieve a complete change in the situation."------ Dr. Bengt Lindquist, the United Nations Special Rapporteur on Human Rights and Disability. UNICEF

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Role of Information and Communication Technology in Education

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Abstract

Education in the past was usually a matter of uni-directional transfer of information from the teacher to the student. The main pedagogical approach was whole class teaching. Many argue that new pedagogical models need to be explored in order to prepare future citizens for life-long learning. There is, as yet, little consensus in societies about what these new pedagogical models should encompass. ICT stands for information and communication technologies. It consists of "diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information." These technologies include computers, the Internet, broadcasting technologies (radio and television), and telephone. In recent years there has been a groundswell of interest in how computers and the Internet can best be harnessed to improve the efficiency and effectiveness of education at all levels and in both formal and non-formal settings. The present paper discusses the role and importance of Information and Communication Technologies (ICTs) in Education and draws the uses of ICTs and challenges in integrating ICT in Education. Finally, it concludes the necessity of implementation of ICT in educational institutions.

I. Introduction

In the modern era, the role of Information and Communication Technology (ICT), especially internet in the education sector plays an important role, especially in the process of employing the technology into the educational activities. Education sector can be the most effective sector to anticipate and eliminate the negative impact of ICT. Internet technology can be the most effective way to increase the student's knowledge. In course of industrial, scientific and technological development, Information and Communication Technology (ICT) has become an inevitable means of pedagogy in education

II. ICT and Education

During the past 20 years, the use of ICT has fundamentally changed the working of education. In the current environment-conscious world, the importance of education and acceptability of ICT as a social necessity has been increasing. Social acceptability of information and communication tools has become necessary to improve the mobility in the society. Education as a qualitative development is not confined to the classroom situation. The modern tools of ICT such as e-Learning and online practice of learning and getting information are much sought after by the students as well as by educational institutions.

The government is spending a lot of money on ICT. The National Mission on Education is emphasizing on the role of ICT in increasing the enrolment ratio in higher education. School education in India has a problem of high dropout rate and need to work on how to minimize this rate. If we make our learning more engaging with the use of ICT, it can completely change our education system. Also, we should examine the challenges of cost-factor and availability of trained teachers in the process of dissemination of education with the help of ICT.

Aims and Objectives

The following are the aims and objectives of ICT implementation in education:

1. To implement the principle of life-long learning / education;
2. To increase a variety of educational services and medium / method;
3. To promote equal opportunities to obtain education and information;
4. To develop a system of collecting and disseminating educational information;
5. To promote technology literacy among all citizens, especially students;
6. To provide distance education throughout the global village;.
7. To promote the culture of learning at school (development of learning skills, expansion of optional education, open source of education, etc.); and
8. To support schools in sharing experience and information with others.

III. Different Types of ICTs Their and Role in Education

1. Radio and television have been used widely as educational tools since 1920s and 1950s, respectively. There are three general approaches to the use of radio and TV broadcasting in education: direct class room teaching, where broadcast programming substitutes for teachers

on a temporary basis; school broadcasting, where broadcast programming provides complementary teaching and learning resources otherwise not available; and general educational programming over community, national and international stations, which provide general and informal educational opportunities.

2. Teleconferencing enables one to "interactive electronic communication among people located at two or more different places." There are four types of teleconferencing based on the nature and extent of interactivity and the sophistication of the technology: (i) audio conferencing; (ii) audio-graphic conferencing, (iii) videoconferencing; and (iv) Web-based conferencing.

3. There are three general approaches to the instructional use of computers and the Internet, namely, Learning about computers and the Internet, in which technological literacy is the end goal; Learning with the help of computers and the Internet, in which the technology facilitates learning across the curriculum; and Learning through computers and the Internet, integrating technological development skills with curriculum applications.

4. Learning with the technology means focusing on how the technology can be the means to learning ends across the curriculum.

5. Many higher educational institutions offering distance education courses have started to leverage the Internet to optimize quality of their programmes.

6. ICT gives students the opportunity to collaborate with scientists in conducting earth science research. Participating students periodically take measurements of the atmosphere, water, soils, and land around their schools. It also provides teachers with guidelines and materials for structured learning activities that take off from the students' hands-on experience.

7. ICT provides e-Journals, which cover all aspects of information and communication technology, its theories and applications.

8. People learn with ICT and digital media as an integrated aspect of everyday course of living – whether in school, at home or at work.

9. ICT provides Blended Learning, which refers to an educational experience created cost-effectively using a mix of integrated distance learning technologies such as videoconferencing, e-learning, videos, and CD-ROM.

IV. Challenges in Integrating ICT and Education

Integrating ICT and Education in the Indian context is not simple and easy. Lack of support from different levels of the government / administration is one of the key elements that causes for unsuccessful implementation of technology in education. Administrators can provide the conditions that are needed, such as school-wide policy, incentives and resources. Administrative support and involvement is crucial to the successful integration of technology.

English is the dominant language of the Internet. An estimated 80% of online content is in English. A large proportion of the educational software produced in the world market is in English. For developing countries in like India, where English language proficiency is not high, especially outside metropolitan cities, this makes a serious barrier to maximizing the educational benefits of the World Wide Web.

A developing country's educational technology infrastructure should be developed for the effective implementation and integration. Sustainability and transferability in ICT implementation and integration is one of the greatest challenges which should also be addressed.

Apart from lack of support from Govt. agencies and lack of English language proficiency, there are other problems too, which obstruct the proper integration of ICTs and Education.

1. There is a tremendous amount of bad information available on the Internet, posing as good   information. It takes a relatively mature person to be able to tell the difference. For students,   this can be a major problem, because their motivation is often to get the assignment done as   quickly as possible (and ICT allows students to get "information" very quickly) and they   might well take the first 6 sources they find rather than taking the needed time to critically   evaluate what they're seeing.

2. Computer presentations (e.g. PowerPoint) can be made quite "glitzy" without adding any benefit beyond what one could have had with a simple overhead. These "glitzy" features most often serve to distract the audience, rather than focus their attention on the subject at hand.

3.   The seductive nature of ICT easily leads to its misuse. For example, one can obtain a CD containing images of great works of art, and with the right "gizmos" present that, to an audience. This would seem to be an advance over slides and slide projectors. But the computer projected images are much poorer than slide projection.

4.   It costs a lot, and once you're on the "technology treadmill" you've got to continually re-invest to "keep up to date".

V. Suggestions/ Recommendations

The following recommendations can help for successful implementation of ICTs in education namely:

- By using ICT integrated applications as government enabler, fostering synergy, ensuring smooth   delivery of citizen driven services.
-   By developing ICT applications geared to remove bureaucratic obstacles to investment.
- By using ICT applications to offer information useful for decision making process at political,   social and economic levels.
- By using ICT applications in e-health by improving delivery of medical services in remote and   underprivileged areas, medical follow up, data bases and continuous education for doctors   through life-long learning.
- By using e-learning applications for a more qualified citizens, to foster creativity and innovation   and increase employability.
-   By establishing databases for investment.
-   By developing e-campaigns on national causes
-   By developing applications for illiteracy eradication.
-   By developing electronic medical records to allow rapid information transfer.
-   By enhancing the internet based recruitment scheme.
-   By developing portals for cultural information and documentation.
-   By developing translation of applications for portals into the local languages.
-   By initiating a program of assistance with technical and financial inputs from appropriate forums.
-   By using all possible outlets for applications usage including phone, internet.
-   By establishing interactive public services, and public procurement.

- By targeting e-services in sectors having high value added, using interoperable interfaces, using   broad band connections and ensuring accessibility from all types of digital terminals.

VI. Conclusion

ICT has brought unimaginable transformation in the all-round development of developed countries. Developing countries like India have not understood the impact of ICT not only in the education sector but also in other sectors. ICT is being used in many imaginative ways to teach higher order reasoning skills. The ultimate aim of ICT adoption now is to facilitate effective transformation of learning through curriculum. Any plan of implementation, which deviates from this aim will result in futility. It should be curriculum driven instead of technology driven, in view of future curriculum reform. The mistake of the past is too much emphasis on technology – e.g. fast computers, expensive multimedia centres and broadcast stations, but with little attention to how they can effectively transform learning. Educational institutions in the past went wrong in adapting students to technology instead of adapting technology to students. Most educational institutions pay their attention these days more to the routine curriculum than the ICT policy statements. If ICT cannot help the implementation of the future curriculum, there is little rationale for its 'survival' or development. Probably an ICT plan is not necessary; rather there should be an educational improvement plan, which includes ICT as an important component. In other words, the implementation of ICT is inseparable from the process of introducing curriculum reform. ICT is a means to help achieving future curriculum goals by providing a learner-centred environment.

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References

1.   Abebe Feleke Seyoum, "Key issues in implementation and integration of ICT in education system of the developing countries", Educational Media Agency, September 2004.

2.   Digital Learning (India), 15-17 December 2011.

3.   Nayak, R., 'Role of ICT in Educational Sector', The Financial Express, 23rd March 2011.

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   36

4.   Savarinus Kaka, S. Pd., 'The Role of ICT in Education Sector", Inside Magazine, Vol.2, July 2008.

5.   Victoria L. Tinio, 'ICT in Education', UN Development Programme, New York, 2002.

6.   Yadhava S.K. 'Quality Improvement of Teacher Education Programme' New Delhi – 2003.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   37

Need for the Parallel Role for Psycho-Techno Teacher

K. Nachimuthu, Ph.D.

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Abstract

Psycho-education is totally focused on training methods, as structured, or transmitted, in accordance with the psychological and individual learners. Education varies depending on the culture, values, attitudes, social systems, the mentality and all these factors play an important role in the study of education in psychology. This paper explains the Learner- Centered Psychological Principles under the design of American Psychological Association in 1997 and the importance of psychology as well as technology in the classrooms. This paper discusses the different software for teaching psychology principles in the Colleges of education. This paper concluded the technology leads to fear and concluded with the need of the hour to think about the way to bring them into the line of psychology and technology to do extremely well in teaching and learning.

Keywords: Psychology, Technology, Software, Teacher Education

Introduction

Psycho-education is totally focused on training methods, as structured, or transmitted, in accordance with the psychological and individual learners. Education varies depending on the culture, values, attitudes, social systems, the mentality and all these factors play an important role in the study of education in psychology.

Currently, the educational psychology covers a wide range of issues and topics, including the use of technology and its relationship with psychology, teaching methods and instructional design. It also considers the social, cognitive, behavioural aspects of learning, but it would take to make education more personal and individualistic by a special unit with a psychological focus of education, so that individual needs are taken considered.

Learner- Centered Psychological Principles

The need of the following fourteen principles are designed by American Psychological Association in 1997 and these are pertain to all learners and the learning process.

1. The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.

2. The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.

3. The successful learner can link new information with existing knowledge in meaningful ways.

4. The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

5. Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

6. Learning is influenced by environmental factors, including culture, technology, and instructional practices.

7. What and how much is learned is influenced by the learner's motivation. Motivation to learn, in turn, is influenced by the individual's emotional states, beliefs, interests and goals, and habits of thinking.

8. The learner's creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.

9. Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners' motivation to learn, the willingness to exert this effort is unlikely without coercion.

10. As individuals develop, there are different opportunities and constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.

11. Learning is influenced by social interactions, interpersonal relations, and communication with others.

12. Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.

13. Learning is most effective when differences in learners' linguistic, cultural, and social backgrounds are taken into account.

14. Setting appropriately high and challenging standards and assessing the learner as well as learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process.

Need for Psychology

A teacher acts as a philosopher and a guide to the students. He must know the growth and development of the child and his requirements at different levels. Educational psychology helps the teacher to study the ability, interests, intelligence, needs and adopt different techniques of teaching for effective communication. The utility of educational psychology for the teachers has been emphasized in both theory and practices of teaching and learning.

The importance of educational psychology for a teacher can be divided into two aspects i.e.: (i) To study teaching and learning situations; and (ii) Application of teaching and learning principles**.** To study teaching and learning situations, the teacher must know the students (a) individual differences; (b) to know the classroom teaching-learning process; (c) awareness of effective methods of teaching; (d) curriculum development; (e) to study mental health of students; (f) guidance to the students; and (g) measuring learning outcomes. For Application of teaching and learning principles the teacher must know the following principles; (a) objectives of education; (b) use of audio-visual aids in teaching; (c) co-curricular activities; (d) preparation of time table and (e) democratic administration.

Importance of Psychology in Classroom

The main importance of educational psychology to teachers is to know, as a teacher, how to deal with our students problems. Psychology is important to teachers in schools because it allows them to better understand the thoughts, emotions, and actions of their pupils. Psychology is the study of the human mind - it is used to analyze behaviour, and to treat people who suffer from psychological disorders. Today, many younger students suffer

from problems that affect their ability to sit still and pay attention in class; disorders such as ADD (attention deficit disorder) and autism are on the rise. The more a teacher knows about these psychological syndromes, the more he or she will be able to do to help the student learn properly. These disorders have certain symptoms that may include withdrawal from social activities, loss (or increase) of appetite, substance abuse, and haughty behaviour.

Sometimes, violence in the classroom, schoolyard, or cafeteria may also occur in schools. Since there is a correlation between certain psychological disorders and violent actions, teacher may need to recognize warning signs - in order to protect other students and staff from high-risk student who may have psychological problems, teachers use psychology to analyze situations according to certain criteria. Of course, unless a teacher is also a trained psychologist, their diagnosis of a troubled student will only be a hunch, or educated guess.

Importance of Technology in Classroom

Education is a life-long process. Therefore anytime anywhere access to it is the need. Information explosion is an ever increasing phenomenon. Therefore there is need to get access to this information. Education should meet the needs of variety of learners and therefore IT is important in meeting this need.

Because technology has increased the intensity and complexity of literate environments, the twenty-first century demands that a literate person possess a wide range of abilities and competencies. These range from reading online newspapers to participating in virtual classrooms. In recent years, the speedy, effective and global communication of knowledge has created a new foundation for co-operation and teamwork, both nationally and internationally. The increasing role played by information technology in the development of society calls for an active reaction to the challenges of the information society.

According to Vijayakumari (2010), technology can also be a catalyst for change in schools. Our children are the builders of tomorrow, so they must be in synchrony with the pace with which our society is transforming itself (Nachimuthu 2011). Technology can

provide that connection between real life and schoolwork. When we focus on the history of technology in education, we find that students, who have basic computer literacy are aware about fundamentals of technology, and they will perform better in the future career.

Although there were some differences in technology utilization between discipline areas, introductory psychology illustrates very well how technology could improve education for developmental students. Approximately 1.5 million students in virtually all colleges and universities in the United States, take it each year (Cush & Buskist, 1997). Although many students find heavy the concept load in a typical introductory psychology course difficult, the subject matter suggests ways for them to remediate deficiencies. In addition to chapters on learning, memory, and motivation, some introductory psychology textbooks include "how to study" sections based on sound psychological principles (Myers, 1995).

However, the computer has not yet led to the dream of a major revolution in the way people learn nor has it yet made much of an impact in higher education. This has certainly been the case for introductory psychology. Although Stoloff and Couch (1992) have published three directories of computer use in psychology and Hornby and Anderson (1996) collected and reviewed 18 computer-assisted packages designed for use in introductory psychology several years ago, there are virtually no reports in the psychology or developmental education literature of psychologists' using them to teach introductory psychology. For example, in the most recent compendium of the best articles published in *Teaching of Psychology* (Ware & Johnson, 1996), only 2 of 16 deal with computers and no others with any form of electronic technology to teach introductory psychology. It is clear, perhaps for the reasons detailed previously, that technology has not had a great impact on the teaching of introductory psychology in any educational environment.

Software Use in Colleges of Education and University Departments of Education in Tamilnadu

Now-a-days, psychology classes in B.Ed. and M.Ed. in Colleges of Education and University departments are taught through using a variety of software. The following table

explains the software utility in Tamilnadu classrooms for teaching of different psychologists and their contributions.

Table.1. Software utility for different psychologist's contributions

Sl.No	Software	Contribution	Psychologist
1.	Dobney	Stimulus/Response Theory	Skinner, B.F
2.	Screensaver v1.0	Events of Instruction	Gagne, R
3.	G8way, Click brick	Zone of Proximal Development	Lev Vygotsky
4.	Carter Center	Democratic Principles in Education	John Dewey
5.	EFL & EAL	Discovery Learning	Jerome Bruner
6.	LCSI	Microworlds	Seymour Papert
7.	CALL	Constructivist Theory	Jean Piaget
8.	Jasper Woodbury	Anchored Instruction	Cognition by Vanderbuilt
9.	Editlib	Cognitive Apprenticeship	Alan Collins, John Seely Brown, and Susan E. Newman

To be effective in helping developmental students become more independent, self-regulating and self-confident learners, technology should function at the level of the student. That is, it should stimulate behaviour change and help students and instructors monitor that change. Technology that makes for a "better" lecture helps the instructor but it is unlikely to change the student. Technology that is "interesting" to students may have only entertainment value unless it systematically advances course learning objectives and helps students see themselves differently. The best way for technology to have a transformational role in developmental education is for it to be effective in transforming students.

Normally a learning style is the method of educating particular to an individual that is presumed to allow that individual to learn best. The idea of learning styles is a somewhat

unfounded deduction of the observation that most people favor particular types of interactions when it comes to learning. Most of the models of learning styles include the following types: (a) Auditory learning occurs through hearing the spoken word; (b) Kinesthetic learning occurs through doing and interacting and (c) Visual learning occurs through looking at images, mind-maps, demonstrations and body language.

Technology Leads to Fear

In today's classroom, teachers are pressed to make every minute count. If the teacher and students are not experienced with technology in the classroom, valuable time is often wasted on technical troubles. In addition, the teacher faces the difficulty of having a class full of students who are all at different skill levels. In many schools, most day scholar students will have a computer and Internet access in their home; but schools that are located in impoverished areas may have fewer computers. Many classroom teachers face is that students often use computers primarily for games. Because of this, many students associate computers and technology with game playing. Today's classroom technology is extremely visual, making it critical for students to maintain excellent eye health. If our child complains of headaches, tired eyes or exhibits decreased concentration, these are all potential symptoms of vision strain (Julie Mahoney, 2010).

The negative impact of technology on students is known universally. Lower class students today know more than anyone about the latest gadgets, cell phones, etc. Children know how to operate the cell phones, play games in it, and get used to them. Video games, PlayStations, i-Phones, i-pads, and Androids are the recreational items. These will distractions of their study and homework activities of day-to-day class works. Today, in most of the schools and colleges, students are supposed to submit college assignments online. As a result, students spend a good hour searching for the best stuff on this platform that has virtually available all information in this world. They are using Control keys combined with 'C, V and S' to do the assignments.

Conclusion

The advent of technology in schools has made the administration process simpler and less ambiguous. School records, attendance and school database maintenance have become very simple, allowing the schooling system to be simpler. Many difficult concepts can be made easy and interesting by the use of audio-visual teaching aids. The knowledge of psychology is necessary to plan and teaching aids appropriately. Special education has become easier after introduction of technology in educational system for candidates who are unable to be taught some subjects due to physical limitations.

Those of us working in developmental education should keep in mind that our basic goal is changing students' behaviour. The question of how technology should be used to teach developmental students should always be answered first with a statement of how it is designed to make students grow and develop as students who are successful because they've taken control of their learning and persist until they are successful. Only then can technology truly help to transform developmental education for our students. Technology can be a powerful tool for teachers to use, if they know how to use it. At the same time, before the technological applications, teachers must identify the level of students, as well as the mental health of the students in the classroom. Lack of application of psychological principles in teaching and learning leads to the arrest of natural development among children. Hence it is the need of the hour to think about the way to give them an understanding of psychology and technology to do extremely well in teaching and learning.

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References

APA Work Group,.(1997). Learner-centered psychological principles (Revised Edition), American Psychological Association, November 1997, Washington, D.C.

Cush, D. & Buskist, W. (1997). Future of the introductory psychology textbook: A survey of college publishers. Teaching of Psychology, Vol.24, pp.119-122.

Hornby, P., & Anderson, M.(1996). Putting the student in the driver's seat, Journal of Educational Technology Systems, Vol. 24, pp. 173-179.

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   45

Julie Mahoney. (2010). An eye opener: Overcoming to UV rays can lead to eye diseases, Clinical care, American Optometric Association, Alexandria, VA

Myers,D.(1995). Psychology (4th edition.), Worth Publishing, New York. pp.86-92.

Nachimuthu, K. (2011). Utility of LCD Projector Responsibility in Teacher Education of India, International Journal Network and Computer Engineering, Vol 3, No.1., pp. 23-29.

Stoloff, M.& Couch,R.(1992). Computer use in psychology, (3rd edition), American Psychological Association, Washington, DC.

Vijayakumari, G. (2011). Role of Educational Games Improves Meaningful Learning, Educational Technology, I-manager Pub, Vol.08. No.02, pp 08-11.

Ware, M., & Johnson, D.(1996). Hand book of demonstrations and activities in the teaching of psychology. Mawah, Lawrence Erlbaum, New Jersy.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   46

Education for All –
The Role of Schools, Teachers and Parents

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ABSTRACT

The goal of a human rights-based approach to education is simple: to assure every child a quality education that respects and promotes her or his right to dignity and optimum development. Achieving this goal is, however, enormously more complex. The right to education is high on the agenda of the international community. Many regions, girls lag far behind. In other regions, there is a growing problem of underachievement by boys. Poverty is a key factor impeding enrolment, primary and secondary completion, and learning outcomes, and children from ethnic minority and indigenous communities consistently underachieve. Together, the conceptual analysis and the framework can be used as a resource for advocacy and social mobilization. They provide the tools with which to conduct a critical review of the current state of education in any country from a human rights perspective and to engage in political dialogue with governments and other partners with a view to adopting a rights-based approach. Schools have a key role to play in translating policies of inclusion into the day-to-day life of education. All children need to feel welcome and confident of equal treatment in the school. Schools need to develop policies to promote an environment of respect throughout the school Schools need to promote environments in which children are engaged as active participants at all levels Teaching children about their rights involves understanding the reciprocal responsibilities these imply. Education rights cannot be realized without the fulfillment of other rights, without the active engagement of all social actors in taking up their responsibilities and without a vision of social change. This framework for the realization of children's right to education and rights within education is one step forward in guiding action towards this goal.

INTRODUCTION

The goal of a human rights-based approach to education is simple: to assure every child a quality education that respects and promotes her or his right to dignity and optimum development. Achieving this goal is, however, enormously more complex. The right to education is high on the agenda of the international community. It is affirmed in numerous human rights treaties and recognized by governments as pivotal in the pursuit of development and social transformation. This recognition is exemplified in the international goals, strategies and targets that have been set during the past 20 years. The Millennium Development Goals, established in 2000, the world's governments committed to achieving universal access to free, quality and compulsory primary education by 2015. In 'A World Fit for Children', the outcome document from the United Nations General Assembly Special Session on Children in 2002, governments reaffirmed these commitments and agreed to a range of strategies and actions to achieve them. More ambitious targets have been established in many regions. Education was recognized as a human right, only a minority of the world's children had access to any formal education; now a majority of them go to school, and participation in formal education beyond the elementary stages has increased. In many regions, girls lag far behind. In other regions, there is a growing problem of underachievement by boys. Poverty is a key factor impeding enrolment, primary and secondary completion, and learning outcomes, and children from ethnic minority and indigenous communities consistently underachieve.

Although there are notable and creative exceptions to the rule, there is growing recognition that the approaches adopted to achieve the goals of universal access and quality education are inadequate. There has been a failure to acknowledge the complexity of the barriers impeding children's access to school, to listen to the concerns expressed by children themselves concerning their education, to build a culture of education in which all children are equally respected and valued, to engage parents and local communities in supporting education, to embrace a holistic approach to education, to address children's rights in education or to embed schools as vibrant centres for community action and social development.

Adopting a rights-based approach to education is not a panacea. It does pose some challenges – for example, the need to balance the claims of different rights holders and

address potential tensions between the realization of different rights or between rights and responsibilities. Nevertheless, consistent adherence to its core principles can help meet the education goals of governments, parents and children. It demands the creation of strategies to reach all children, including the most marginalized. It empowers communities, parents and other stakeholders to claim their rights, insist that these be fully implemented and, when necessary, seek their enforcement in national courts. Education for All addresses the educational rights of children rather than adults. Not only does it focus on the right to education, it also addresses rights within education, including human rights education.

ROLE OF SCHOOLS
INTRODUCING PRACTICAL MEASURES FOR INCLUSION

Schools have a key role to play in translating policies of inclusion into the day-to-day life of education. All children need to feel welcome and confident of equal treatment in the school. Schools need to promote an atmosphere of respect for all children. They should instigate a culture that ensures that no bias is tolerated that favors or discriminates against any learner or group of learners – whether in respect of admission procedures, treatment in the classroom, opportunities for learning, access to examinations, opportunities to participate in particular activities, such as music or drama, or marking of work. Children should never be stereotyped or insulted on the basis of who or what they are. Teachers need to take active measures to involve girls on an equal basis with boys. Schools need to develop policies setting out the principles of non-discrimination and ensure that all teachers, parents and children are aware of the policy and know how to make a complaint if it is breached. Children and parents should be involved in the development of the policy as this will strengthen ownership and understanding. The process of developing the policy is also an opportunity to address the issues, learn why they are important, and develop skills in negotiation, listening and understanding different points of view and experiences.

PROMOTING A RESPECTFUL ENVIRONMENT

Schools need to develop policies to promote an environment of respect throughout the school. These policies should be developed through collaboration with all stakeholders,

including children. For example, policy and guidance can be provided on: how to promote a non-violent approach to conflict resolution both between teachers and children and among children themselves; how to promote children's active participation in school decision-making processes; and how to develop school codes of behavior that govern the relationships between all members of the school community and contribute to educational processes. These guidelines can be adapted and developed by individual schools, involving children, parents and teachers, all of whom need to feel ownership of the subsequent policies.

ACCOMMODATING DIFFERING NEEDS

Inclusion necessitates action to accommodate children's differing needs. It may be necessary, for example, to ensure that some classes are held on ground floors to accommodate wheelchair users. Schools can pilot models of education that allow more flexible participation in the classroom, take classes to where children are with different groups of children arriving at different times to enable children to learn in flexible groups that take account of external demands on their time, such as agricultural work or domestic labour, although it is vital not to reduce the often already limited learning time available to them. Some schools in Bangladesh have a flexible schedule that runs for limited hours, six days a week, with the times set by local parents and the school calendar adapted to accommodate local considerations, such as harvests.115 Depending on their age, children need regular breaks to help them rest and learn effectively, particularly those children who come to school having already undertaken paid work or domestic chores. Children can work on a modular basis or in groups where they learn together in accordance with the hours they can attend, and also in tutoring initiatives that are often provided in complementary or after-school programmes.

ENCOURAGING LOCAL ENGAGEMENT

Child-friendly schools need to be responsive to the local context. Within a Frame work of core standards and principles, individual schools should be able to adapt to the needs of the local community and provide a relevant curriculum that takes account of local concerns and

priorities. For example, some schools have made children's participation in managing the environment of the school and local community integral to the basic concept of the school as a community-based centre for democratic learning.

ENGAGING CHILDREN AS PARTNERS

Schools need to promote environments in which children are engaged as active participants at all levels as peer educators and mentors for younger children; in setting up and running school councils that act as a forum for addressing children's concerns; in helping develop school policy, including behaviour codes and discipline; in advising on such issues as playground design, and location and design of latrines; in contributing to the curriculum; in providing feedback and evaluation on the curriculum and teaching methods; as mediators helping resolve conflicts; and in participating on school governing bodies. One approach to creating a participatory environment is to employ the use of 'circle time', a process whereby children come together each day in a circle to discuss issues of concern to them, identify problems and explore solution Children can also be involved in establishing the indicators used to monitor how well a school is respecting the rights of all its members, and they can take part in a process of regular evaluation of compliance with those indicators. They can then share in the responsibility of developing strategies for improving practice. In all these strategies, efforts need to be made to ensure equal opportunities for participation by all children.

THE SCHOOL UNDER THE MANGO TREE

The Sementinha, or school under the mango tree, was first established for 4- to 6-year-olds in a city in Brazil in response to the many young children not attending school. The methodology is based on the ideas of circle and play. Each day starts with the children sitting in a circle and being asked, "What shall we study today?" Participation is a fundamental principle and all children, regardless of age, have a right to contribute. Initially, they were unable to express themselves, but with encouragement from the teachers, they gradually built up confidence and began to put forward opinions. All group questions are resolved in a circle, which is a space for talking, listening, arguing, reflecting and reaching

consensus. In this way, children do not feel excluded if their ideas are rejected. The children also have a role in assessing the activities. This is done through verbal discussion, as well as drawing, singing, creating stories and writing poems. The children's feedback is taken seriously by the teachers and informs future activities. The teachers also meet in a circle before school begins to discuss their plans, and again at the end of the day to review the activities that have taken place. Our government may also follow such innovative practices for the enrolment of children in the schools.

ROLE OF SUPPORTING SCHOOLS

Local community members can generate critical advocacy for education and raise resources to improve school facilities. They can contribute financial support, organize fund-raising activities, join school governing bodies, support community based curricula activities, contribute to 'working parties' to maintain the school environment, campaign for improved funding, help adapt school buildings so they are more accessible for children with disabilities and encourage the elimination of child labour in their communities. The active involvement of the local community raises the status of the school and lends support to a perception that education is important and must be valued and protected for all children. However, it needs to be recognized that communities are not homogeneous. Efforts to promote community involvement should include poor and marginalized households, and particular efforts may be required to achieve that goal.

ROLE OF TEACHERS

While the wider educational infrastructure is vital, it is teachers who have the most impact on the day-to-day experience of children in school. A quality education, in which children want to take part, is dependent on the commitment, enthusiasm, creativity and skill of teachers. It is their task to translate national policies into practical action in each school and to ensure that they embrace a culture that is inclusive and respectful of every child. While governments have responsibility for setting the terms and conditions of teachers' work and for promoting a culture of respect for their work, much can be done at the local level to uphold the rights of teachers. Head teachers have responsibilities for advancing teachers'

rights, providing appropriate support, addressing concerns, involving teachers in decision-making in the school and promoting respect for their work in the local community. They also need to help teachers understand their roles and responsibilities and monitor their behaviour. They should demonstrate their willingness to respect the rights of children.

ROLE OF PARENTS
PARENTS AS PARTNERS

Many parents lack the skills, knowledge and resources to interact effectively with teachers and school authorities, while on the part of schools there is often a lack of commitment to reach out to parents. Yet, investment in parents may be as important in the education of a child as the direct learning in school. Schools need to organize regular meetings of parents to share with them the goals of the school, the curriculum that is being taught and updates on the child's progress to enable them to better understand the child's education. Such contact enlists parents as partners in the educational process. Schools can also encourage parents to assist in the classroom, help out in the wider school environment and become members of school boards. Their involvement not only leads to the contribution of practical skills and energy but also increases the sense of ownership of the school, and with it a commitment to children's effective education. Local groups, such as parents' associations or mothers' clubs, are vital in supporting children's education. Through cooperative organizing, parents can become effective advocates for improved standards and provision. They can work to support the school, monitor children's progress and hold the school to account on its achievements. Such clubs and associations can also play an important role in capacity-building because they create opportunities to develop skills in organizing committees, fund-raising, public speaking and networking.

CONCLUSION

In conclusion, education rights cannot be realized without the fulfillment of other rights, without the active engagement of all social actors in taking up their responsibilities and without a vision of social change. This framework for the realization of children's right to education and rights within education is one step forward in guiding action towards this

53

goal. It is anticipated that it will be used by governments, UN agencies, non-governmental organizations and donors in their ongoing work to achieve Education for All.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   54

Attitude towards e-Learning in Classroom Instruction among the B.Ed. Students at Colleges of Education

B.V. Gopal and K. Anandan, Ph.D.

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INTRODUCTION

The modern Information and Communication technologies are technological tools and resources used to communicate, and to create, disseminate, store and manage information. ICT enables self-paced learning to help all students to achieve high academic standards.

Hence the investigator sorted out the utilization of e-learning which is one of the resources of ICT's in Classroom Instruction which has become more result-oriented in improving the teaching learning process. Since the quality and efficiency of education depends to a great extent on the quality of teachers. Only quality teachers opt for change or innovation in their teaching aspect through integrating technology in the Classroom Instruction to give the best to student-teachers. Besides the Technology is a powerful tool for problem-solving, conceptual development and critical thinking which helps to make the learning process much easier for the B.Ed. Students. Therefore the Educational Institutions is necessary to undertake innovative programmes for Teacher-Educators to update and upgrade their teaching competencies to facilitate the teaching process effectively.

REVIEW OF THE RELATED LITERATURE

The investigators have identified few studies related to present study. Vijayarani, K. (2005) conducted a study on "Attitude towards Educational Technology among B.Ed. students of Bharathidasan University" concluded that B.Ed. students have favorite attitude towards Educational Technology. Annie Marie Merlene (2008) emphasize that most of the teachers of today happen to belong to the 'Television–generation' and being 'Television–shaped learners', will have to learn new methods of ICT, to keep pace, and to be at par with the present day 'Internet-shaped, Neo-Millennial Learners'. Gopal, B. V. (2008) developed and validated e- content on Electromagnetic Wave Theory in Physics at Higher Secondary Level concluded that 'e-content makes the teaching learning process more effective' and 'e-content enhances the achievement of the students in the particular subject'. Littlejohn, et. al.

(2008) revealed in his study that the widespread availability of digital learning resources in a variety of media formats offers the possibility to make a profound difference in education. From the above review of various studies it is concluded that most of the studies are stressing the significance and attitude towards ICT among the students.

NEED FOR THE STUDY

The paradigm shift in the field of education triggered by grey revolution is matched by real life teaching learning situations.   The whole game of education becomes learner centric and learning centric. To be in the paradigm shift that the world of education witnessed any teacher of any level of education must adapt their relationship with learners, switching from soloist with learners, switching from soloist to accompanist and shifting the emphasis from dispensing information to helping learners seek organized and manage knowledge guiding them rather than moulding them. One of the main tasks of education in a modern society is to keep pace with the advancement of Technology in acquiring the related information from the reliable e-Resources. One has to change the mind set of people by educating them about the power of e-learning.

Online learning could help bridge the gap between distance education and formal education. The Attitude on e-Learning in Classroom Instruction is important factor among B.Ed. Students in order to implement the usage of it in a productive way. Therefore the present study attempts to assess the level of "Attitude on e-Learning in Classroom Instruction among the B.Ed. Students at the Colleges of Education".

OBJECTIVES OF THE STUDY

The Major objective of the study is to find out the Attitude on e-Learning in Classroom Instruction among the B.Ed. Students at Colleges of Education.
The Specific objectives of the study are

(i) To measure the level of Attitude on e-learning in Classroom Instruction

(ii) To find out if there is any significant difference towards Attitude on e-learning in Classroom Instruction among the B.Ed. Students with respect to the Demographic variables such as Gender, Subject-wise and Parental Occupation.

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
Editors: P. Udayakumar, M.Sc., M.Phil., M.Ed., M.A., Ph.D. Candidate,
Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   56

(iii) To find out the percentage scores of the different component of e-Learning such as Multimedia, WEB, Video Conferencing and CCTV towards the attitude on e-learning in Classroom Instruction among the B.Ed. Students at Colleges of Education.

HYPOTHESES OF THE STUDY

The hypotheses framed for the study are mentioned below.

i) The Mean Scores towards the level of Attitude on e-learning in Classroom Instruction among B.Ed. Students is high.

(ii) There is no Significant difference in Mean Scores towards the Attitude on e-Learning in Class-room Instruction among the B.Ed. Students with respect to the Gender.

iii) There is no Significant difference in Mean Scores towards the Attitude on e-Learning in Class-room Instruction among the B.Ed. Students with respect to the Subject-wise.

(iv) There is no Significant difference in Mean Scores towards the Attitude on e-Learning in Class-room Instruction among the B.Ed. Students with respect to Parental Occupation.

METHODOLOGY OF THE STUDY

This study belongs to the Survey Research Method

i) Selection and Size of the Sample

The investigators had selected 360 B.Ed. Students as sample by Random sampling technique from 2 Self-Aided colleges and 2 Government Colleges in Bharathidasan University Catchment Area.

ii) Tool Development

Investigators have developed the tool, 'Attitude on e-Learning in Classroom Instruction (AECI)' based on the four components such as Multimedia, Web, Video-Conferencing and Closed Circuit Television (CCTV). The Tool consists of fifty items in Four-point Rating Scale. The Correlation Co-efficent of the reliability of ATP was found to be 0.87, which is highly reliable. The tool was administered to the 360 B.Ed. students.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   57

iii) Data Analysis

The data collected through the questionnaire from the B.Ed. students were converted into a Master Table. Mean, Standard Deviation, Percentage and "t" test were used to analyze the data for the present study. The results were presented in the following tables.

TABLE 1

TOTAL MEAN SCORES OF THE ATTITUDE ON E-LEARNING IN CLASS-ROOM INSTRUCTION AMONG B.Ed. STUDENTS IN TOTAL

S. No.	Category		N	Mean	SD
1.	Total		360	53.03	9.78
2.	Gender	Male	88	51.33	9.93
3.		Female	272	52.06	8.67
4.	Subject-wise	Arts	176	48.90	11.43
5.		Science	184	53.76	6.52
6.	Parents Occupation	Private	215	52.11	9.13
7.		Government	145	51.75	9.78

On observing the above Table No.1, it is understood that Mean and SD of the total sample were 53.03 and 9.78. The obtained Mean value is 53.03 out of maximum value of 100. It shows the level of attitude on e-learning for classroom instruction among the B.Ed. student is found to be average. Hence the framed null hypothesis is not accepted.

't' VALUES OF MEAN SCORES TOWARDS ATTITUDE ON E-LEARNING WITH RESPECT TO GENDER

S. No.	Gender	N	Mean	SD	t value
1.	Male	88	51.33	9.93	
2.	Female	272	52.06	8.67	0.3569**

**Not Significant at 0.01 level

From the above Table 2, it is seen that the 't' value 0.3569 is not significant at 0.05 level. It is understood from the results that there is no significant difference among the B.Ed. Students at Colleges of Education with respect to their Gender. Male and Female B.Ed. Students are having similar level of attitude on e-learning for Classroom Instruction. Hence the framed null hypothesis is accepted.

TABLE 3

't' VALUES OF MEAN SCORES TOWARDS ATTITUDE ON E-LEARNING WITH RESPECT TO SUBJECT-WISE

S. No.	Subject-wise	N	Mean	SD	t value
1.	Arts	176	48.90	11.43	
2.	Science	184	53.76	6.52	2.9823*

*Significant at 0.01 level

From the above Table 3, it is seen that the 't' value 2.9823 is significant at 0.05 level. It is understood from the results that there is a significant difference among the B.Ed. Students at colleges of education with respect to their Subject-wise. Science subjects B.Ed. Students are having more level of attitude on e-learning than the Arts subject Student-teachers. Hence the framed null hypothesis is not accepted.

TABLE 4

't' VALUES OF MEAN SCORES TOWARDS ATTITUDE ON E-LEARNING WITH RESPECT TO PARENTAL QUALIFICATION

S. No.	Parental Qualification	N	Mean	SD	t value
1.	Private	215	52.11	9.13	
2.	Government	145	51.75	9.78	0.2356**

**Not Significant at 0.01 level

From the above Table 4, it is seen that the 't' value 0.2356 is not significant at 0.05 level. It is understood from the results that there is no significant difference among the B.Ed. Students of Colleges of Education with respect to their Parental qualification. Both Private and Government Parental qualification of the B.Ed. Students are having similar level of attitude on e-learning for Classroom Instruction. Hence the framed null hypothesis is accepted.

TABLE - 5

PERCENTAGE SCORES OF B.ED. STUDENTS TOWARDS ATTITUDE ON E-LEARNING IN CLASS-ROOM INSTRUCTION

S. No.	Components of e-learning	Percentage
1	Multimedia (MM)	32%
2	Web	44%
3	Video Conferencing (VC)	16%
4	Closed Circuit Television (CCTV)	8%

From the above Table 5, it is found that Web component having 44% is higher percentage on attitude towards e-learning over other all components related to the e-Learning features. From the results, it is inferred that the B.Ed. Students having more access over the Internet browsing abilities which is a good sign factor for their improvement of their teaching the students in schools. Next in the order, Multimedia packages having 32% implies the better prospects for the B.Ed. students to prepare their own teaching material when they become Teachers of the future generation. As Video Conferencing component having 16%, reveals the fact that the B.Ed. students are aware of this features and tends to utilize them in their Classroom Instruction. In the case of attitude on CCTV components having only 8% implies that the Management of the Institution has not provided these facilities for them in their classroom Instruction.

FINDINGS OF THE STUDY

The findings of the study are stated below.

Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   60

i) It is found that the Total Mean value is 53.03 out of maximum value of 100 which is found to be average. This implies that the B.Ed. Students are having lesser attitude towards e-learning for the Classroom Instruction.

ii) There was no significant difference between the mean scores of the attitude of B.Ed. students towards e-learning for classroom instruction with respect to Gender and Parental qualification.

iii) There is a significant difference between the scores of the attitude of B.Ed. students towards e-learning for classroom instruction with respect to their discipline of the Subject-wise.

iv) From the findings, the Web component is higher than the other components. It is inferred that the B.Ed. Students having more access over the Internet browsing abilities.

v) It is found to be CCTV components is having thee lesser percentage of attitude among the B.Ed. students. This implies that the B.Ed. students are having less utilization of CCTV in their classroom instruction.

DISCUSSION AND CONCLUSION

From the above findings of this present study, it is seen that the Total Mean value towards the attitude on e-learning in classroom instruction is 53.03 out of maximum value of 100 which is found to be average among the B.Ed. Students at colleges of Education. This result is contradictory to the findings of the studies conducted by Vijayarani, K. (2005) and Gopal, B.V. (2008). There is a significant difference between the scores of the attitude of B.Ed. students towards e-learning for classroom instruction with respect to their discipline of the Subject-wise. Similar results were found from the study conducted by Rekha, N. (2007). It is concluded from the study that the B.Ed. students are to be strengthened to utilize the e-learning components in their classroom. Teacher-educators may be given in-service training on e-learning, so as they can able to use e-learning features in their teaching methods. Therefore the Teacher-educators can keep their students more

Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   61

attentive and to make them to understand the concepts of their subject-matter easily which will enhance their learning process.

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References

Anandan, K. & Gopal, B.V. (2011). Information Communication Technology in Classroom Instruction, EDUTRACKS, Volume 11, No.1, September 2011, pp.9-10

Anandan, K. (2010). Instructional Technology in Teacher Education, A.P.H. Publishing Corporation, New Delhi.

Anandan, K. & William Dharma Raja, B. (2010). Educational Technology, A.P.H. Publishing Corporation, New Delhi.

Anandan, K. (2010). Opinion of the Teacher Trainees Towards ICT, Journal of Community Guidance & Research, Vol.27 No. 1 pp 47-52.

Cook, John and Smith, Matt (2004). Beyond Formal Learning: Informal Community e-Learning, Computers and Education, Vol.43, No.1, pp.35-47.

John W. Best and James V. Kahn (1986). Research in Education (Fifth Edition) Prentice – Hall of India Pvt.Ltd., New Delhi.

Lokesh Koul (2002). Methodology of Educational Research, Second Edition, New Delhi: Vikas Publishing House, Pvt. Ltd.

Okamoto, Toshio., et al. (2002). Hybrid E-Learning System for a Cooperative Linkage between University and Industry, Reports - Evaluative; Speeches/Meeting Papers.

Van Rosmalen, P., et al. (2008). A Learner Support Model Based on Peer Tutor Selection, Journal of Computer Assisted Learning, Vol.24, No.1, pp.74-86.

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Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   62

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Technology Enabled Learning

Jayanthi, M.Com., M.Ed., M.Phil.

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Abstract

This preliminary study compared the effects of technology-enabled courses and face-to-face instruction using student learning styles and student preferences for content types. Two groups of students enrolled in problem-based courses (one in the College of Engineering and the other in the College of Applied Science) were included in this quasi-experimental research. A survey was used to collect information about the students' preference for content types. Kolb's Learning Styles Inventory was used to measure student learning styles preferences. The results indicated an expected preference in the engineering technology disciplines for concrete experience over abstract conceptualization. Neither the delivery medium nor the content type (face-face or online) had any statistically significant impact on students' final performance. A significant finding was that both group profiles suggested differing needs for presentation of content and learning styles for students in the two colleges. The conclusion was that learning styles could influence content type preferences among students in either environment (face-to-face or online) but this hypothesis needs more research.

WHAT IS TECHNOLOGY ENABLED LEARNING (TeL)
NEW DIRECTION IN EDUCATION

The Technology Enabled Learning (TeL) is a platform for providing Internet enabled Education. Its significance has increased as the penetration of Internet clearly indicates the worldwide acceptance of it as a communication tool. Technology Enabled Learning (TeL) uses Internet as a media for leveraging the pitfalls of our traditional education system by providing an environment, which is more learners centric rather than being more instructors centric, powered by Internet Technology. The Technology Enabled Learning (TeL) has laid a new chapter in education. Through the Technology Enabled Learning (TeL), learners can

now undergo training sitting at their home or any other place with Internet accessibility and continue their education.

Education shapes the destiny of a nation. It is the principle instrument of developing human capabilities and transforming the economy. The traditional structure of the classroom has existed for thousand of years and has evolved by passing through various phases. The first phase was the Gurukul where gurus imparted knowledge to shishyas. Then came the second phase where the teacher taught using blackboard and chalk. In the third phase virtual aids like OHP and multimedia took over the traditional system of imparting education.

Now **Education becomes ONLINE**. Technology Enabled Learning (TeL) is Internet enabled technology driven education that allows you to **study Anytime…. Anywhere**…. as per your convenience.

In the context of rapid technological advancement and changing global market, the impact is felt on every field including education arena. Technology Enabled Learning (TeL) is one of the ways of imparting effective education to the aspiring people, residing anywhere in the world, to pursue and advance their learning process via Internet, without messing up their professional responsibilities and duties with education by presenting a variety of solutions and subjects beyond the scope of traditional education. Online learning helps to increase the educational experiences irrespective of age and geographical diversity.

Technology Enabled Learning (TeL) is an umbrella term that describes learning done on a computer, usually connected to a network, giving us the opportunity to learn almost anytime, anywhere. Technology Enabled Learning (TeL) is not unlike any other form of education - and it is widely accepted that Technology Enabled Learning (TeL) can be as rich and as valuable as the classroom experience or even more so. With its unique features Technology Enabled Learning (TeL) is an experience that leads to comprehension and mastery of new skills and knowledge, just like its traditional counterpart.

Instructional Design for Technology Enabled Learning (TeL) has been perfected and refined over many years using established teaching principles, with many

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   65

benefits to students. As a result colleges, universities, businesses, and organizations worldwide now offer their students fully accredited online degree, vocational, and continuing education programs in abundance.

Some other terms frequently interchanged with Technology Enabled Learning (TeL) include:

» Online learning

» Online education

» eLearning

» Web-based training

» Computer-based training (generally thought of as learning from a CD-ROM)

Technology Enabled Learning (TeL) is a broad term used to describe learning done at a computer.

WHY TECHNOLOGY ENABLED LEARNING (TeL)?

We have to keep on learning so that we can grow personally, professionally, socially and economically. For thousands of years, the paradigm of learning was the classroom-training model. In a time when formal learning was scarce, resources were concentrated around and centered on the availability of the educator, rather than the learner. Today Technology Enabled Learning (TeL) is the self- paced learning methods combine advanced technology and multimedia in a format that engages students so they learn faster, participate more actively and consequently, retain information longer.

FEATURES OF TECHNOLOGY ENABLED LEARNING (TeL)

"Good teaching is good teaching, no matter how it's done." The old adage still rings true, and Technology Enabled Learning (TeL) brings with it new dimensions in education.

Some of the unique features of Technology Enabled Learning (TeL) are listed below.

- Learning is self-paced and gives students a chance to speed up or slow down as necessary.

- Learning is self-directed, allowing students to choose content and tools, appropriate to their differing interests, needs, and skill levels.
- Accommodates multiple learning styles using a variety of delivery methods geared to different learners; more effective for certain learners.
- Designed around the learner.
- Geographical barriers are eliminated, opening up broader education options.
- 24/7 accessibility makes scheduling easy and allows a greater number of people to attend classes.
- On-demand access means learning can happen precisely when needed.
- Travel time and associated costs (parking, fuel, vehicle maintenance) are reduced or eliminated.
- Overall student costs are frequently less (tuition, residence, food, child care).
- Potentially lower costs for companies needing training, and for the providers.
- Fosters greater student interaction and collaboration.
- Fosters greater student/instructor contact.
- Enhances computer and Internet skills.
- Draws upon thousands of years of established pedagogical principles.
- Has the attention of every major university in the world, most with their own online degrees, certificates, and individual courses.

BENEFITS OF TECHNOLOGY ENABLED LEARNING (TeL)

Enables education anywhere, anytime and to anyone

The world-wide-web empowers the University to deliver training & critical information to its wide spread student base no matter where & what time zone the users are in. They can just access it whenever they feel like, from home or from office.

Always on

Class starts when you want. Facilitates self-paced learning- It gives the students the flexibility to go through the programme content at the time that is most convenient to him and thereby achieves an appropriate balance of work, family, community and educational commitments.

Better Access

Determining the best time to schedule a class and lure the student into the "brick and mortar" classroom is one of the major drawbacks of traditional training programs. Technology Enabled Learning (TeL) provides access to training for students when and where they need it.

Cost Savings

A much-touted benefit of Technology Enabled Learning (TeL) is cost savings. Lot of amount can be saved in travel and downtime alone by using Technology Enabled Learning(TeL). Training materials can be updated for a fraction of the cost of revising materials distributed by other means. Payback can be seen clearly over the near and long term.

Learner Focused

Technology can personalize content and anticipate learner's future information learning needs. It also can match content with each individual's learning style, experience and skills.

Measurable

Powerful Learning Management System (LMS) features make the implementation, hosting, tracking, testing, auditing and administration of online courses a flawless process. Technology Enabled Learning (TeL) provides secure and reliable systems for recording and capturing what an individual knows and is able to do.

Better Learning Outcomes

Research from around the world has proven that the Technology Enabled Learning(TeL) results better outcomes in terms of learning and knowledge retention when compared with traditional methods of teaching.

Faster Response Time

Time sensitive training can be delivered faster than through traditional classroom methods. By using communication technology to deliver training to multiple sites at the same time,

Technology Enabled Learning (TeL) becomes a competitive advantage.

Better Use of "Experts"

An expert presenter or trainer can be used more cost effectively with Technology Enabled Learning (TeL) than through traditional classrooms. Programs that require the presence of an expert can send the expert's message to multiple sites simultaneously - saving time and money. And the message is consistent for every delivery of the course.

CONCLUSION

It is necessary to take a broad view in order to understand and determine how ICT impacts on learning. This is because educational achievements are shaped not only by the way education is organized but also by the socio-economic background of the learners, their socio-cultural environments, the changing skills and competences that are necessary for employment, education and training, self-development and participation in society. This clarifies partly why non-formal learning, informal learning and adult learning are increasingly seen as crucial for the future of learning.

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Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   69

Technology's Impact on Learning and Better Understanding

L. Jenitta
B. Saminathan, Ph.D.

Abstract

Technology plays a critical role in academic content standards and their successful implementation. Expectations reflecting the appropriate use of technology should be woven into the standards, benchmarks and grade-level indicators. Technology makes subjects accessible to all students, including those with special needs. Options for assisting students to maximize their strengths and progress in a standards-based curriculum are expanded through the use of technology-based support and interventions. Specialized technologies enhance opportunities for students with physical challenges to develop and demonstrate mathematics concepts and skills. Technology influences how we work, how we play and how we live our lives. The influence technology in the classroom should have on math and science teachers' efforts to provide every student with "the opportunity and resources to develop the language skills they need to pursue life's goals and to participate fully as informed, productive members of society," cannot be overestimated.

Introduction

In this present technological era, Technology as a medium of communication is acting as a current driving force behind Teaching – Learning process. Various technologies can be made a part of everyday teaching and learning, teachers using technology in ways that enable students to conduct inquiries and engage in collaborative activities. In traditional or teacher-centered approaches, computer technology is used more for drill, practice and mastery of basic skills.

Effects of Educational Technology

In a 1994 Software Publishers Association (SPA) study, research found that:

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   70

- Educational technology has a significant positive impact on achievement in all subject areas, across all levels of school, and in regular classrooms as well as those for special-needs students.
- Educational technology has positive effects on student attitudes.
- The degree of effectiveness is influenced by the student population, the instructional design, the teacher's role, how students are grouped, and the levels of student access to technology.
- Technology makes instruction more student-centred, encourages cooperative learning, and stimulated increased teacher/student interaction.
- Positive changes in the learning environment evolve over time and do not occur quickly.

Verbal/Linguistic Intelligence: The ability to think, communicate, and create through words both in speech and in writing.

- Computer software which allows young children to write and illustrate their own stories before their fine motor skills are developed enough to allow them to do so by hand.
- Word processing software stimulates learners to interact more closely with their work.
- Audio and video recording can give students instant feedback on their story-telling skills and can help them develop them further.
- Multimedia software helps students produce multimedia reports.
- Telecommunications programs link students who correspond in writing.

Logical/mathematical intelligence: Memorize and perform mathematical operations, ability to think mathematically, logically, and analytically and to apply that understanding to problem solving.

- Multimedia products that graphically illustrate physics concepts.
  - Providing challenging visual/spatial tasks which develop mathematical and logical thinking.

o Develop higher-order mathematical thinking by making abstract ideas concrete.

Visual/spatial intelligence: The ability to understand the world through what we see and imagine and to express ideas through the graphic arts.

- "Paint" programs that allow students who are unskilled with paper and brush create art on computer screens.
- Databases of art work.
- Desktop publishing.
- Camcorders to create documentaries.
- Internet links to museums and virtual tours.

Bodily/kinesthetic Intelligence: The ability to learn through physical coordination and dexterity and the ability to express oneself through physical activities.

- Educational games which challenge fine motor coordination while developing logical thinking skills and mastery over abstractions.
- Construction of lego robots and program their movement through the computer.
- Electronic fieldtrips - programs that allow students to interact electronically with a scientist who is exploring the depths of the Mediterranean or the inside of a volcano.

Musical Intelligence: The ability to understand, appreciate, perform, and create music by voice or instruments or dance.

- Students can hum into a synthesizer and make it sound like any instrument they want.
- Musical Instrument Digital Interface (MIDI) makes it possible to make music on an electronic keyboard, which can be made to sound like any instrument and then can be orchestrated electronically.
- Interactive presentations of renowned classical music let students understand music on many different levels; listening to it, seeing the score as it is played, hearing individual instruments played alone, reviewing biographical material about the composer and learning about the music's historical and cultural backgrounds.

Interpersonal Intelligence: The ability to work cooperatively with other people and to apply a variety of skills to communicate with and understand others.

- Clusters of students working together on computers learn more than individual students working alone.
- Electronic networks linking students with their peers within the community and around the world.
- Lumaphones allow students to see a picture of the person with whom they are speaking.

Intrapersonal Intelligence: The ability to understand, bring to consciousness, and express one's own inner world of thoughts and emotions.

- Multimedia gives teachers the tools to turn the classroom into centers of student-directed inquiry.
- Technology offers tools for thinking more deeply, pursuing curiosity, and exploring and expanding intelligence as students build "mental models" with which they can visualize connections between ideas on any topic.
- Individual growth plans, developed jointly by the student, parents and teacher can encourage the development of intrapersonal intelligence. Technology supports such plans with electronic records, videotaped interviews, and multimedia portfolios of student work.

Does Technology Make an Impact on Education?

"Technology is making a significant, positive impact on education. Important findings in these studies include:

- Educational technology as demonstrated a significant positive effect on achievement. Positive effects have been found for all major subject areas, in preschool through higher education, and for both regular education and special needs students. Use of online telecommunications for collaboration across classrooms in different geographic locations has also been show to improve academic skills.

73

- Education technology has been found to have positive effects on student attitudes towards learning leads to better understanding and on students' self-concept. Students felt more successful in school, were more motivated to learn and have increased self-confidence and self-esteem when using computer-based instruction. This was particularly true when the technology allowed learners to control their own learning.

- The level of effectiveness of educational technology is influenced by the specific student population, the software design, the teacher's role, how the students are grouped, and the level of student access to the technology.

- Introducing technology into the learning environment has been shown to make learning more student-centred, to encourage cooperative learning, and to stimulate increased teacher/student interaction.

- Positive changes in the learning environment brought about by technology are more evolutionary than revolutionary. These changes occur over a period of years, as teachers become more experienced with technology.

- Courses for which computer-based networks were use increased student-student and student-teacher interaction, increased student-teacher interaction with lower-performing students, and did not decrease the traditional forms of communication used. Many students who seldom participate in face-to-face class discussion become more active participants online.

- Greater student cooperation and sharing and helping behaviours occurred when students used computer-based learning that had students compete against the computer rather than against each other.

- Small group collaboration on computer is especially effective when student have received training in the collaborative process.

Learners could never write well about something until they had understood well about it. Simulations are opportunities to work with learn on how to think well about fairly complex matters. Thus computer simulations are very exemplify how to enhance the learning effectiveness leads to better understanding by utilizing various information technologies and teaching methods. Technology provides simulation. They are very much useful in teaching as well learning science. The learner can manipulate the size, shape, orientation and

dimensions of any diagrammatic illustrations through simulation. For instance, topics such as wave motion, Brownian motion, gaseous diffusion, the effect of pressure on gas, seed germination, interference and diffraction pattern of light waves, satellite motion etc. can also be very well taught and learners can also be benefited leads to better understanding with the help of various technologies. Thus technology leads to active, constructivist methods of teaching and learning and enhance the understanding level.

Conclusion

The new emerging trend towards technology therefore enables self – paced learning through various tools such as assignments, computers, etc., with sensitive to different learning styles and continuous assessment of students' progress. With the result, the teaching – learning enterprise has become more result – oriented. Teacher must have knowledge and skills to use new digital tools and resources to help all students achieve high standards. In the future educational scenario, Technology will be necessary to enhance the effective integration and incorporation of technology which helps in standard quality education, where it provides accessibility, empowering personal capabilities to utilize technology – oriented strategies of leaching and learning which is much required for the upliftment of the learners understanding.

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References

1. **Barnett. R** (2004), Learning for an Unknown future, Higher Education Research& Development 23(3), 247-260
2. **Manoj Kumar Dash**, Integration of ICT in Teaching and learning, article from EDUTRACKS, vol 6,No.12 August 2007. pp 11 and 13.

Webliography

3. http://www.ed.gov/Technology
4. http://www.spa.org/
5. http://www.nsba.org/sbot/toolkit/tiol.html#Enhanced

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   75

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Blended Learning Enhances Teaching-Learning

L. Jenitta, T. Balasubramanian and B. Saminathan, Ph.D.

Abstract

The recent appearance of books, trade magazine and journal articles, conferences, and campus initiatives focusing on "blended learning" would lead one to believe that a new educational phenomenon has been discovered. In actuality, the blending of face-to-face instruction with various types of non-classroom technology-mediated delivery has been practiced within the academy for more than four decades. the confluence of new pedagogies(for example, the change in emphasis from teaching-centered to student-centered learning paradigms), new technologies (for example, the rapid spread of the Internet, World Wide Web, and personal computers), and new theories of learning (for example, brain-based learning and social constructivism) are enabling entirely new models of teaching and learning and that this change is of sufficient magnitude to be described as an educational transformation or paradigm shift. A nexus for the development of these new models has been the online environment. Previous educational technologies, such as instructional television, have tended to replicate the classroom environment and its traditional teaching methods. Web-based learning environments invite—and may even require— reconceptualization of the learning paradigm.

Introduction

"Blended Learning" refers to courses that combine face-to-face classroom instruction with online learning and reduced classroom contact hours (reduced seat time).blended learning should be approached not merely as a temporal construct, but rather as a fundamental redesign of the instructional model with the following characteristics:

➢ a shift from lecture- to student-centered instruction in which students become
active and interactive learners (this shift should apply to the entire course, including the face-to-face contact sessions);

➢ increases in interaction between student-instructor, student-student, student-content, and student-outside resources; and

➢ integrated formative and summative assessment mechanisms for students and instructor.

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"Life Long Meaning Making"

One more strategic advantage is that Blending traditional f2f learning with Online Distance Learning provides the learner with a real chance to experience independent learning, moreover, Blended Learning is a sure step towards Life Long Learners, and Life Long Meaning Making (Arafatmy, 2011).

Blended Learning described as "integrative Learning", "hybrid learning", "multi-method learning" (Node, 2001). "The term "blended learning" is being used with increasing frequency in both academic and corporate circles. In 2003, the American Society for Training and Development identified blended learning as one of the top ten trends to emerge in the knowledge delivery industry" (cited in Rooney, 2003) (Graham, 2004)

Mixing synchronous learning and asynchronous learning

A blended learning approach can combine face-to-face facilitation with computer-mediated instruction and/or discovery learning opportunities. It also applies science or IT activities with the assistance of educational technologies using computer, cellular or Smartphones, Satellite Television channels, Video Conferencing and other emerging electronic media. Learners and teachers work together to improve the quality of learning and teaching, the ultimate aim of blended learning being to provide realistic practical opportunities for learners and teachers to make learning independent, useful, sustainable and ever growing.

Blended learning increases the options for greater quality and quantity of human interaction in a learning environment. Blended learning offers learners the opportunity "to be both together and apart." A community of learners can interact at anytime and anywhere because of the benefits that computer-mediated educational tools provide. Blended learning provides a 'good' mix of technologies and interactions, resulting in a socially supported, constructive, learning experience; this is especially significant given the profound effect that it could have on distance learning.

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Advantages of blended learning

One clear advantage of blended learning in education is its connection with differentiated instruction. Differentiated instruction involves "custom-designing instruction based on student needs."In differentiated instruction, educators look at students' learning styles, interests, and abilities. Once these factors have been determined, educators decide which curriculum content, learning activities, products, and learning environments will best serve those individual students' needs. Blended learning can fit into a number of these areas. By using blended learning, educators are definitely altering the learning environment when students work collaboratively in learning communities online, for example. Teachers could also add relevant curriculum content that would be unavailable or difficult to comprehend outside of the internet. Learning activities and products can also be changed to use technologies in a classroom that uses blended learning.

Another advantage of blended learning is pacing and attendance**.** In most blended learning classrooms, there is the ability to study whenever the student chooses to do so. If a student is absent, she/he may view some of the missed materials at the same time that the rest of the class does, even though the student cannot be physically in the classroom. This helps students stay on track and not fall behind, which is especially helpful for students with prolonged sicknesses or injuries that prevent them from attending school. These "self-study modules" also allow learners to review certain content at any time for help in understanding a concept or to work ahead for those students who learn at a faster pace. (Alvarez, 2005)

Effective use of blended learning materials

The novelty of online learning is apparent in the diversity of names given to the phenomenon: Web-based learning, e-learning, and asynchronous learning networks, among others. These efforts have been focused primarily on off-campus student populations. With the more recent on-campus emphasis, yet another set of labels has appeared, including hybrid learning, blended learning, and mixed-mode instruction. The mere existence of so many names for what is essentially a single concept suggests that no dominant model has yet been accepted as a definition

of standard practice.

Technology provides teachers with the instructional technology tools they need to operate more efficiently and to be more responsive to the individual needs of their students. Selecting appropriate technology tools give teachers an opportunity to build students' conceptual knowledge and connect their learning to problem found in the world. The technology tools such as Inspiration technology, Starry Night, A Web Quest and Portaportal allow students to employ a variety of strategies such as inquiry, problem-solving, creative thinking, visual imagery, critical thinking, and hands-on activity.

Various technologies can be made a part of everyday teaching and learning, teachers using technology in ways that enable students to conduct inquiries and engage in collaborative activities. In traditional or teacher-centered approaches, computer technology is used more for drill, practice and mastery of basic skills.

The instructional strategies employed in such classrooms are teacher centered because of the way they supplement teacher-controlled activities and because the software used to provide the drill and practice is teacher selected and teacher assigned. The relevancy of technology in the lives of young learners and the capacity of technology to enhance teachers' efficiency are helping to raise students' achievement in new and exciting ways.

Students need grade-level appropriate classroom experiences, enabling them to learn and to be able to do science in an active, inquiry-based fashion where technological tools, resources, methods and processes are readily available and extensively used. As students integrate technology into learning about and doing science, emphasis should be placed on how to think through problems and projects, not just what to think.

Technological tools and resources may range from hand lenses and pendulums, to electronic balances and up-to-date online computers (with software), to methods and processes for planning and doing a project. Students can learn by observing, designing, communicating, calculating,

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D. 78

researching, building, testing, assessing risks and benefits, and modifying structures, devices and processes – while applying their developing knowledge of science and technology.

Students build scientific and technological knowledge, as well as the skill required to design and construct devices. In addition, they develop the processes to solve problems and understand that problems may be solved in several ways through blended learning.

Conclusion

Blended Learning is starting to become vastly well – liked. This kind of training refers to studying by utilizing two or even more kinds of training. This may be numerous kinds of e-learning or on- line studying or numerous kinds of off- line studying. The most typical in addition to hottest type of blended learning is mixing classroom studying with on – line studying. This blended learning requires the very best characteristics of instructor – led studying and length studying and integrates it into one magnificent method to get a training. On – line studying is excellent simply because if a pupil is having difficulties they are able to get much more individualized assist without using absent essential classroom time. This truly caters towards the require of various learners using the capability to tailor the content material particularly towards the learner.

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References

1. Clarke, Alan (2007) "The Future of e- Learning, Adult Learning",Vol. 18 (7), p14-15

2. Subaragavelu, Muthukrishnan(2007) "ICT, A Boon for Higher Education", An article from EDUTRACKS, vol6, No12. August 2007.

3. http://myudara.com/blog/how-can-instructional-technology-make-teaching-and-learning-more-effective-in-the-schools/

4. http://net.educause.edu/ir/library/pdf/ERB0407.pdf

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University and the Classroom: Can Podcasts Replace Professors?

H. Kavitha and S. Binukumari

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ABSTRACT

The University, a website with downloadable educational podcasts, can provide students the opportunity to obtain professors' lectures when students are unable to attend class. To determine the effectiveness of audio lectures in higher education, undergraduate general psychology students participated in one of two conditions. In the lecture condition, participants listened to a 25-min lecture given in person by a professor using PowerPoint slides. Copies of the slides were given to aid note-taking. In the podcast condition, participants received a podcast of the same lecture along with the PowerPoint handouts. Participants in both conditions were instructed to keep a running log of study time and activities used in preparing for an exam. One week from the initial session students returned to take an exam on lecture content. Results indicated that students in the podcast condition who took notes while listening to the podcast scored significantly higher than the lecture condition. The impact of mobile learning on classroom performance is discussed.

Keywords: Media in education, Multimedia/hypermedia , Post-secondary education, Distance education, Pedagogical issues

Introduction

The concept of electronic classrooms continues to evolve and change as the technology expands in many directions. One recent introduction The University, a website with downloadable educational podcasts,. The idea of educational podcasts that are easily accessible takes mobile learning, or m-learning, to the next generation. Apple points out that the benefits of University

include that it is easily accessible 24 h per day, students can listen to the podcasts whenever and wherever they choose, and it helps to keep the students motivated because it engages them in a way that is very familiar to them (University is a link on the website). Although these benefits seem to make educational podcasts appealing to students, the question of the educational benefits of m-learning remains to be answered. Thus, in this paper, we address the question of whether m-learning actually provides educational benefits, or at the very least, does not harm students that opt for a podcast instead of the actual in-class lecture. Examining previous research on the educational benefits of computers and technology in general points to a complex picture. A meta analysis of computer-based instruction for college students indicates small but positive effects (Kulik, Kulik, & Cohen, 1980).

Other researchers have also found no educational advantage for the use of PowerPoint slides (Apperson et al., 2006;Susskind, 2005), but Austin, Lee, and Carr (2004) found that lectures with slides resulted in superior notes. Further evolution of technology and computers in educational settings has resulted in stand-alone web-based courses, where all learning takes place outside of the traditional classroom. Evidence for educational advantages for web-based courses also appears to be mixed, as it seems to depend upon the type of course, and what educational activities are included (Maki & Maki, 2002). Other research examining the effects of teaching with multimedia, where the multimedia included audio, video, animation, graphics and text, found that the multimedia resulted in better recall than traditional lectures with PowerPoint slides (Hallett & Faria, 2006). However, for multimedia learning to be effective, the overall cognitive load for the pictorial and verbal material needs to be taken into account (Mayer & Moreno, 2003). In general, the mixed results of all of these types of studies indicate that other variables may be crucial factors in explaining how computers and technology influence educational outcomes.

The addition of University as a resource for students in the classroom is interesting because it gives students a chance to listen to a lecture for the first time (if they missed a class) or listen to a

lecture that they attended in person additional times after the class session is over. Since note-taking has been shown to influence achievement, the current study is interested in examining whether students would take notes when listening to a podcast of a lecture that they may have missed. It is clear that for a traditional lecture given in a classroom, students are expected to take notes. Peer example, and possibly pressure from professors, may create this expectation, students have also learned that academic achievement is greater when notes are taken in class. One recent study did examine students' attitudes about using podcasts for revising existing notes from a previous lecture (Evans, 2008). Students believed that the podcasts helped them revise their notes more effectively than the textbook. Although the students seemed receptive to learning through podcasts and agreed with the advantage of being able to listen to podcasts when and where they chose, only 20% of the students actually listened to the podcasts on a mobile device. The remaining 80% listened to the podcasts on their computer. Thus, while all students in this study seemed to value the flexibility and mobility of m-learning, the majority of the students did not actually take advantage of the mobility of the podcast. Other recent research indicates a preference by students for traditional lectures over computer-based lectures, including a podcast-like condition on the computer, where a PowerPoint lecture was narrated auditorily (Stephenson, Brown, & Griffin, 2008).

In their study, PowerPoint slides with audio clips were available on computer for students to use as a tool for reviewing lectures. Students who did use the 'virtual lecture' for 100 min or more scored higher on a subsequent test. Additionally, perceptions of these students about the 'virtual lecture' were quite positive. Thus, when we examine the limited existing research on podcasts, or podcast-like conditions, we find mixed results with regard to attitude. One possible explanation is the particular use of the podcast. The two studies that found positive attitudes regarding podcasts or 'virtual lectures' used these conditions as a tool to help students revise their notes from already existing lectures (Cramer et al., 2007; Evans,2008). The remaining study where the traditional lecture was preferred assigned students to either an 'e-lecture' (podcast-like condition), a traditional lecture, or to a 'virtual lecture' condition which consisted of a multi-

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   83

media presentation online (Stephenson et al., 2008). For each condition, the lecture material was only available in the assignment format, thus students had to rely solely on the electronic delivery of the necessary information, rather than just using the podcast to help revise already existing notes. Yet none of these studies had a podcast condition where all students in that condition truly participated in mobile-learning. Thus, we are interested in investigating what the attitudes of students will be when they participate in a true m-learning condition, that is, where the podcast is only available to them on a mobile device that allows them to take the lecture with them anywhere they go. Finally , the research examining educational outcomes has only used podcast-like conditions, but even here the results are mixed.

2. Matrials and Method

2.1. Participants and design

Participants were general psychology students attending a small, liberal arts college in New York state. They were given extra credit in a psychology course of their choice for their participation. In addition, participants in each condition were told that the highest score in each experimental condition on an exam given during session two of the experiment would be given a $15 iTunes gift card. This gift card allowed participants to download audio books or music, or to rent a movie, all of which could be viewed or listened to on their I POD or on their own computer; thus, an I POD was not necessary to utilize the gift card. This compensation was given to help motivate students to try hard to do well on the exam. The design of the study was a non-equivalent group, post-test only quasi-experimental design. Students participated in either the podcast condition or the in-class lecture condition. Forty students attended session one of the experiment in each condition. However, the critical component of the experiment was attending session two, the follow-up exam. Thirty-two students completed both sessions of the in-class lecture condition; thirty-four students completed both sessions of the podcast condition. Students self selected into the two different conditions because assignment in the podcast condition was

based on student ownership of anmp3 player. Students in this condition knew they were signing up for an experiment that would require the use of their mp3 player, and they were asked to bring it to the experimental session.

With this type of quasi-experimental design, one of the methodological questions that needs to be addressed is whether the two conditions were different before the treatment was administered. Thus, participants in the two conditions were evaluated with respect to existing differences in GPA and SAT scores.

Materials and procedure

Session one

Lecture materials for the experiment were taken from an introductory psychology textbook chapter on perception. The lecture was constructed to be approximately 25 min in length. This was shorter than a typical course lecture, but still contained plenty of testable material. In an effort to keep the initial experimental session less than an hour to match academic course scheduling on our campus, this time limit was chosen. A PowerPoint slide show was constructed based on the lecture material. In addition a 50-point exam was created from this lecture content. The exam consisted of multiple choice, matching, and fill-in-the-blank questions. This format was chosen as it is the typical format used in large survey courses.

Students in the in-class lecture condition were told that they would be listening to a lecture on perception. Students began the session by receiving a copy of the PowerPoint slides that would be presented during the lecture. The printouts were four slides to a page, with accompanying lines to the right of the slides that students could use to take additional notes during the lecture. Students were also given several blank pages of paper that they could use for note-taking if they preferred. The students in this condition were told that the purpose of the study was to assess

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   85

how they responded to technology in the classroom, specifically the use of PowerPoint slides in a lecture. Before the lecture began, students completed a questionnaire on demographics (class standing, major course of study, etc.), their study habits, and their ownership and use of mp3 players. In addition, they were asked if they had ever listened to podcasts of classroom lecture material.

After the questionnaires were collected, students were instructed that they would now receive a lecture that would be approximately 25 min in length. They were also told that they would be coming back for a second session in one week's time for an exam over the material covered during the lecture today and so they should take notes as they normally would when they knew the material covered would be on an exam. Students were told to interact with the professor as they normally would in a classroom setting (feel free to ask questions, to tell the professor to slow down the presentation for note-taking purposes, etc.). At the end of the lecture, the students were given a handout that they were to use over the course of the week to record their study sessions of the notes and PowerPoint slide handouts from the lecture.

One potential criticism of the method used to encourage students to try hard for the exam is that in the podcast condition, students may have felt they were competing against students in an in-class lecture format. Thus it is possible, given their desire to try the new technology, they may have more incentive to try harder on the exam than their in-class lecture counterparts. This concern was addressed in two ways. First, the in-class lecture condition students were led to believe they would be compared to a group of peers in a traditional lecture condition that did not use PowerPoint slides. (Given the limited subject pool at our college, we did not in fact run this condition.) Second, the instructions were equally designed for each group to be competing against other members in their same group in order to be the winner of the gift card.

Software (version 2.2), which allows video syncing of PowerPoint slides along with recorded audio. They were told that the podcast they were receiving was a copy of an actual lecture that

had been presented earlier in the week. Students that had mp3 players with video capabilities were told that the slides from the lecture would appear on the screen as the lecture progressed. Students who had mp3 players that did not possess video capabilities were told that during the lecture the professor would make reference to the slides in the PowerPoint handout, and that they should be able to follow along by having the handout available when they listened. In addition, students were told that if they chose to take additional notes while listening to the podcast, they could do so on the lines provided on the PowerPoint handouts, or that they could use separate paper if they preferred. They were told to bring back the handouts and any additional notes they made to session two. Students were then given a copy of the study session tally. As in the other condition, students were told to be honest in their recording. This was the same study session tally sheet that was given to the in-class lecture condition, containing spaces for six study sessions. Students were told to record how they used the podcast during each session (if they took notes, if they only listened but did not take notes). They were also told to record if they just studied the copies of the PowerPoint slides or copies of any notes they may have made from the podcast, but did not listen to the podcast again. They were given session two reminder slips and dismissed.

Session two

One week after their initial session, students returned for session two. In both conditions, students were instructed to pull out the notes and copies of PowerPoint slides from session one, and were given 5 min to study these notes. At the end of that time, all of their materials from session one, as well as their study session tally sheet were collected. They were then given the 50 point exam over the lecture material. After taking the exam, students in the in-class lecture condition were given a debriefing sheet and dismissed. After taking the exam, the students in the podcast condition were given an additional questionnaire that asked them specifically about ways they used the podcast. They were asked how many podcasts they had previously listened to, and specifically, if they had ever listened to podcasts of classroom lecture previously. (This question

was a repeat from the initial questionnaire that all students were given during session one.) It also asked them what they did when they initially listened to the podcast (listened while doing other things, listened while not doing other things but did not take notes, listened and took notes just as they would have in a classroom setting, etc.). It also asked about subsequent listening sessions. Lastly, it asked about their preference for the way to get material from lectures if they were to miss a class (get a podcast or get a copy of notes from a friend). After completing this additional questionnaire, students in this condition were given a debriefing sheet and dismissed.

Results and discussion

Questionnaires

Due to the descriptive and exploratory nature of the questionnaires, only percentages and means were calculated from the questionnaire data. Of the 66 students that completed the experiment, 57 of them owned mp3 players (86%). Twenty-eight out of the 57 also had video capabilities on their players (49%). While 57 of the participants had mp3 players, only 3 students in the study had ever listened to podcasts before (5%), and none of the students had ever listened to a podcast of a classroom lecture. The average amount of time the students who had mp3 players spent listening to them each day was 1.67 h (SD = 1.20 h). The most common answer to the question of time spent listening was 1 h per day. Thirty-four students completed the podcast condition, and thus filled out the podcast usage questionnaire during the second session. Eighteen of the 34 participants had mp3 players with video capabilities (52.9%). We asked participants that had video capabilities if they felt having the PowerPoint slides on the screen matching the audio feed was helpful. All but 5 found this feature helpful (72.22%). In addition, one feature of using ProfCast software to record the lecture that was true regardless of mp3 video capabilities was the addition of chapter markers into the podcast. With each change of PowerPoint slide, a chapter marker was created. Several students commented that these chapter markers were very useful for studying and reviewing desired sections of the podcast. It also helped those without video

capabilities to coordinate with the PowerPoint handouts provided. The 16 participants who did not have video capabilities on their mp3 players were asked if they were able to follow along with the lecture and match the PowerPoint handouts to the lecture easily.

Exam performance

An initial t-test revealed that the students in the podcast condition scored significantly higher on the exam in session two than the students in the in-class lecture, $t(64) = 2.12$, $p < .05$. Students in the podcast condition had an average score of 71.24% (SD = 16.50%), whereas students in the in-class lecture condition had an average score of 62.47% (SD = 17.03%). This result was The data from the podcast condition was then sorted into two groups: students who took additional notes on the PowerPoint slide handouts or on additional pages of paper, and students who took no additional notes of any kind. Of the 34 participants in the podcast condition,22 students had taken additional notes, and 12 students had not. Results of a t-test on this data revealed a significant difference in performance between the two groups, $t(32) = 2.59$, $p < .01$. Students who took additional notes scored significantly higher, 76.23% (SD = 13.61%) than students who merely listened to the podcast but did not take additional notes, 62.08% (SD = 17.93%). The mean of the students that merely listened to the podcast but took no additional notes was not significantly different than the in-class lecture students, $t(42) = .06$,$p > .05$. differences in specific tasks done during study or preference for studying alone or in groups.Lastly, the answers on the podcast questionnaire were examined to see if there may have been anything specific in these answers that could help explain the significant advantage students in this condition showed on the exam. Table 2 shows the results of the podcast

Table 1 : Mean score on exam by experiment condition and note-taking category

	Average notes	minimal notes	average notes	extensive notes

In class lecture	N-0	N-15 M-57.87 SD = 16.85	N-17 M = 66.53 SD = 16.62	N-0
Podcast	N = 12 M= 62.08 SD= 17.93	N = 1 M = 63 SD = −	N = 17 M = 77.12 SD = 13.94	N = 4 M = 76.00 SD = 14.02

Table 2: Number and time of listens by participants in the podcast condition.

Never	Once	Twice	Three	Five Seven	Total
Number of total times podcast was listened to					
1	11	8	11	2 1	34
Time of day of all listens					
8 am–2:55 pm	3 pm–8:55 pm	9 pm–later	no am/pm	never listened	Total

16	31	16	11	1
75				

Conclusion

The results of this study are in no way an indication that audio copies of lectures could or should replace actual professors, or even regular class attendance. The advantage the students in our study received was only when the student took notes as they would do during a lecture, and when they listened to the lecture more than once. In essence, the same things a student does during the actual lecture, they would need to do to show a benefit of the podcast. This study is small in nature, but it is the only study we found that examined podcasts in a format that incorporated true m-learning conditions accompanied by educational outcomes. The finding that students in the podcast condition did significantly better than students who attended the in-class lecture was unexpected and somewhat novel in the body of literature on the use of technology to aid learning.

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References

1. Annis, L. F. (1981). Effect of preference for assigned lecture notes on student achievement. Journal of Educational Research, 74, 179–182.

2. Apperson, J. M., Laws, E. L., & Scepansky, J. A. (2006). The impact of presentation graphics on students' experience in the classroom. Computers & Education, 47, 116–126.

3. Austin, J. L., Lee, M., & Carr, J. P. (2004). The effects of guided notes on undergraduate students' recording of lecture content. Journal of Instructional Psychology, 31, 314–320.

Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   91

4. Cramer, K. M., Collins, K. R., Snider, D., & Fawcett, G. (2007). The virtual lecture hall: Utilisation, effectiveness and student perceptions. British Journal of Educational Technology,38, 106–115.

5. Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. Computers & Education, 50, 491–498.

6. Hadwin, A. F., Kirby, J. R., & Woodhouse, R. A. (1999). Individual differences in notetaking, summarization, and learning from lectures. The Alberta Journal of Educational Research, XLV, 1–17.

7. Hallett, T. L., & Faria, G. (2006). Teaching with multimedia: Do bells and whistles help students learn? Journal of Technology in Human Services, 24, 167–179.iTunes U. (n.d.). Retrieved April 3, 2008,

8. Kiewra, K. A. (1985). Learning from a lecture: An investigation of notetaking, review and attendance at a lecture. Human Learning, 4, 73–77.

9. Maki, W. S., & Maki, R. H. (2002). Multimedia comprehension skill predicts differential outcomes of web-based and lecture courses. Journal of Experimental Psychology: Applied,8, 85–98.

10. Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. Educational Psychologist, 38, 43–52.

11. Russell, I. J., Caris, R. N., Harris, G. D., & Hendricson, W. D. (1983). Effects of three types of lectures notes on medical student achievement. The Journal of Medical Education, 58,627–636.

12. Spickard, A., Smithers, J., Cordray, D., Gigante, J., & Wofford, J. I. (2004). A randomised trial of an on-line lecture with and without audio. Medical Education, 38, 787–790.

13. Stephenson, J. E., Brown, C., & Griffin, D. K. (2008). Electronic delivery of lectures in the university environment: An empirical comparison of three delivery styles. Computers &Education, 50, 640–651.

14. Susskind, J. E. (2005). PowerPoint's power in the classroom: Enhancing students' self-efficacy and attitudes. Computers & Education, 45, 203–215.

15. Szabo, A., & Hastings, N. (2000). Using IT in the undergraduate classroom: Should we replace the blackboard with PowerPoint? Computers & Education, 35, 175–187.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   92

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Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   93

Education for All

S. L. Kiruthika

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"Education is the key to the new global economy, from primary school on up to life-long learning. It is central to development, social progress and human freedom."

From the Millennium Report

Vital statistics

- ✓ The number of children in school rose significantly in the past decade, from 599 million in 1990 to 681 million in 1998.
- ✓ Since 1990, some 10 million more children go to school every year, which is nearly double the 1980-90 average.
- ✓ East Asia, the Pacific, Latin America and the Caribbean are now close to achieving universal primary education.
- ✓ The number of out-of-school children decreased from 127 million in 1990 to 113 million in 1998. In Latin America and the Caribbean, for example, the number of out of-school children was halved, from 11.4 million in 1990 to 4.8 million in 1998.
- ✓ The number of children in pre-school education has risen by 5 per cent in the past decade. Some 104 million children were enrolled in pre-primary establishments in 1998.
- ✓ The number of literate adults doubled from 1970 to 1998 from 1.5 billion to 3.3 billion. Today, 85 per cent of all men and 74 per cent of all women can read and write.
- ✓ Some 87 per cent of young adults (15-24 years old) are literate worldwide.
- ✓ Despite progress in actual numbers, illiteracy rates remain too high: at least 875 million adults remain illiterate, of which 63.8 per cent are women – exactly the same proportion as 10 years ago.

Why is education important?

Imagine girls who are not allowed to go to school just because they are girls. Imagine abandoned children or demobilized boy soldiers, with little or no schooling, living on the street, without work or safe shelter. Imagine sick babies, dying because their mothers cannot read the prescription on the medicine bottle, or a farmer, losing his ancestral land because he cannot read the legal documents.

Basic education is, and always has been, the key to freedom from subjugation, fear and want. Education is an effective weapon to fight poverty. It saves lives and gives people the chance to improve their lives. It gives people a voice. And it increases a nations' productivity and competiveness, and is instrumental for social and political progress.

What is basic education?

Basic education is more than just learning how to read, write and calculate. It encompasses the broadest possible sense of learning -- formal, non-formal and informal -- and at any stage of life. Learning takes place in and out of school -- in the home, the local community, the workplace, and in recreational and other settings. Not confined to childhood and the formative years, it extends from infancy throughout the whole of life.

What exactly does basic education mean?

Basic refers to the competencies, knowledge, attitudes, values and motivations that are deemed necessary in order for people to become fully literate and to have developed the educational foundations for a lifelong learning journey.

Basic education is not a fixed or clear-cut concept and most countries have chosen to restrict 'basic' to primary schooling, meaning the first stage of formal schooling. 'Basic', in an increasing number of countries, however, now encompasses junior secondary schooling and in other it extends to a full secondary education.

China, for example, is shifting the focus for much of the country from the primary school to the nine years compulsory school, preceded by a variety of early childhood care and education programmes.

In Brazil, a law adopted in 1996 defined the whole system from day care provision to the end of secondary schooling as 'basic'. Throughout Europe, North America, Australia, Japan and parts of South East Asia, 'basic' includes both primary and secondary levels.

In a small but growing number of countries, some kind of post secondary or tertiary education is almost becoming 'basic' in that it is seen as a foundation for working life or further studies for all youth.

Shifting the focus from quantity to quality

Education for all is not the same thing as quality education for all. Today, it is widely agreed that it is not enough to put children into school, they also have to learn something relevant and stay in school. Most countries, including countries with large populations such as Bangladesh, Brazil, China and Mexico, are now talking about quality, a concept that covers everything from the physical condition of schools to better teacher training, from the availability of textbooks to more parental involvement.

The need for improving the efficiency of education systems is urgent. Today, in South Asia and sub-Saharan Africa less than three out of four pupils reach fifth grade. In terms of measuring efficiency, their school systems are wasting up to a third of their resources on repeaters and drop-outs. In fact, a quarter of the 96 million pupils who entered school for the first time in 1995 are likely to abandon their schooling before fifth grade. By failing to be sensitive to the needs of many ordinary and low-achieving pupils, schools cease to be truly open and accessible to all.

Education, not Discrimination

Girl's education makes all the difference, not only in terms of economic development but human development. However, in today's world, girls continue to be systematically more disadvantaged than boys solely on the basis of discrimination by gender. Sixty per cent of the 110 million children out of school in developing nations are girls. The gender gap continues to be unacceptably wide despite the fact that the education of girls and women is now on policy-making agendas in most developing nations and the fact that 44 million more girls attend primary schools in developing countries than in 1990.

Basic education for girls does pay off in a number of ways:

- ❖ Literate women tend to marry later and are more likely to use family planning methods.
  - ❖ Life expectancy at birth rises because children with literate parents are more likely to survive infancy.
  - ❖ Family income rises as literate parents tend to have fewer children and are more likely to find better-paying jobs.
  - ❖ Literate workers are more productive as they are more likely to seek ways to improve their work

Writing off debt to fund education

The impact of foreign debt is one of the principal reasons education budgets suffer in many developing countries. While investing in education yields major long-term benefits, governments face pressing short-term demands for resources to service foreign debt payments. Falling into arrears has an immediate negative effect on a country's ability to raise credit or pay for its imports. Yet at the global level, there is a strong cost-benefit argument to be made for writing off at least some international debt and using those resources to invest in education, at a time when overseas aid from rich to poor countries is declining.

The 1996 Heavily-Indebted Poor Countries debt relief initiative supported by the World Bank and a group of wealthy countries acknowledged the social cost of structural adjustment policies. The G8 meeting of some of the world's richest countries in Cologne in 1999 widened

its scope. Yet many argue that debt relief is still moving too slowly, is too bureaucratic, and is too restricted by special conditions.

New challenges in education

Daunting challenges are facing the Education for All movement in the future: how to reach out with education to HIV/AIDS victims in regions such as Africa where the pandemic is reaping havoc in terms of teacher loss, orphaned pupils and teacher and pupil absenteeism; how to extend education to the increasing number of refugees and displaced people; how to help teachers acquire a new understanding of their roles and how to harness the new technologies to benefit the poor.

And probably the most daunting challenge of all – in a world with 700 million people living in 42 highly indebted countries – how to help education overcome poverty and give millions of children a chance to realize their full potential.

What is needed most is additional resources. Secretary-General Kofi Annan, in his Millennium Report, notes that providing primary education for the 130 million children in developing countries who do not now enjoy it would add an estimated $7 billion a year to educational costs over a 10-year period.

What are needed are not just schools. "Schools must be accessible, have qualified teachers and offer such amenities as textbooks and supplies for the poor."

The Secretary-General has set very specific ggoals: to demonstrably narrow the gender gap in primary and secondary education by 2005; to ensure that by 2015, all children everywhere -- boys and girls alike -- will be able to complete primary schooling "Implementing these goals will require all our sensitivity, imagination, and determination. It will, indeed, be a test of our entire international community," Mr. Annan told the World Education Forum, held in Dakar, Senegal in April 2000.

Education for all: The building blocks

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   98

1948: The Universal Declaration of Human Rights proclaimed by the United Nations. Education is declared a basic right of all people.

1959: The Declaration on the Rights of the Child. Education is declared a right of every child.

1966: The International Convention on the Elimination of All Forms of Racial Discrimination proclaimed the right of all to education, regardless of race or ethnicity.

1981: The Convention on the Elimination of All Forms of Discrimination against women called for the elimination of discriminating against women and for equal rights in education.

1990: The World Declaration on Education for All, adopted at the World Conference on Education for All in Jomtien, Thailand, defined a bold new direction in education, declaring that "Every person – child, youth and adult – shall be able to benefit from educational opportunities designed to meet their basic learning needs".

1993: The E-9 Education Summit where governments from the world's nine high population countries pledged to universalize primary education and significantly reduce illiteracy in their respective countries by the year 2000.

1996: The Amman Affirmation adopted at the Mid-decade Meeting of the International Consultative Forum on Education for All, called for accelerated efforts to meet the goals of Education for All set in 1990.

1996: The report to UNESCO of the International Commission on Education for the Twenty-first Century promoted a holistic view of education consisting of four "pillars": learning to know, learning to do, learning to be and learning to live together. The text was widely adopted

2000: The Dakar Framework for Action, adopted at the World Education Forum (26-28 April 2000, Dakar, Senegal) commits governments to achieve quality basic education for all by 2015, with a particular emphasis on girls' education, and a pledge from donor countries and

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   99

institutions that "no country seriously committed to basic education will be thwarted in the achievement of this goal by lack of resources."

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   100

Inclusive Education in Crossroads: Issues and Challenges

Mrs. Mary & Dr. Sybil Thomas

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Children with Disabilities

"Neglected, Marginalised are common in knowledge world. We are not the sources of problems. We are the resources that are needed to solve them. We are not expenses, we are investments. We are the children of the world and despite our different backgrounds we share a common reality. We are united in our struggle to make the world a better place for all."

Ms. Gabriela Arrieta -Opening address at the UN Special Session on Children, May 2002.

This is a world where approximately 120 million children are not enrolled in primary school. In this paper it is highlighted that the potential for education to reverse the negative effects of social exclusion. There are an estimated 30 million children out of school in India (MHRD statistics, cited in World Bank), many of whom are marginalised by dimensions such as poverty, gender, disability, and caste. While many educational programmes have attempted to reach out to these previously excluded children, those with disabilities are often forgotten, emphasising their invisible status in a rigidly categorised society.

The Goal of This Paper

This paper aims to present a case study of the current status of inclusive education in India with a focus on children with disabilities. The paper argues that a twin-track approach to disability may assist not only in improving educational access for marginalised children, but also the reconceptualization of inclusive education as a school quality issue to benefit all children. This could contribute in the long-term towards the achievement of Education For All and fulfilment of the Fundamental Right to Education enshrined in the Constitution of India in 2002.

Disability, a development

The World Health Organisation estimates that 10% of any population is disabled. In addition, approximately 85% of the world's children with disabilities under 15 live in developing countries. It is further thought that with disability, or impairment, being both a cause and consequence of poverty, the Millennium Development Goals cannot be achieved without a specific disability focus. People with disabilities have health, nutritional, educational and gender needs too, yet the goals related to these issues currently ignore the often unique needs of people with disabilities within these goals. The WHO estimates that up to 50% of disabilities are preventable, with 70% of blindness and 50% of hearing impairment in children in developing countries being preventable or treatable (DFID, 2000). Although this can be seen as more of a health issue than a disability politics one, its link to healthcare, malnutrition and poverty makes disability a development issue.

Inclusive education - What is it?

Until recently, most conceptual literature on inclusive education was Northern (European and North American) in origin, taking a 'whole-school' approach to institutional change (Peters, 2004), and influenced by the social model of disability. Children in special schools were seen as geographically and socially segregated from their peers, and the initial movement to vocationally integrate these students in mainstream schools ('integration') shifted to one where the whole school was encouraged to become more adaptable and inclusive in its day-to-day educational practices for all students ('inclusive education'). Pedagogy in particular was highlighted as the key to meeting all students' educational needs by making the curriculum flexible, and so more accessible. By recognising that teaching methods which can make curriculum accessible to children with disabilities can also make learning accessible to all students, a teacher or school principal is well on the way to improving the overall quality of their school. In this way, inclusive education is not a disability-only issue, but an educational quality issue.

There is a growing, although not comprehensive, literature in the south (developing nations), which focuses more on external factors with its 'community approach'. In developing contexts with large numbers of out-of-school children, inclusive education tends to be more broadly concerned with school access and education deprivations for marginalised groups such

as girls, ethnic minorities, poor families and disabled children in CREATE zones one and two, who have never attended or dropped out of school. It seems that there is currently an expanding discourse on inclusive education developing amongst some academics and teaching professionals in India, many of whom, like Mike Oliver (1996), see inclusive education as exclusively concerned with children with disabilities. This discourse is attempting to shift perceptions of disability from the medical model to the social model. However, there are many conceptual difficulties with the terms of integration and inclusion in India, which are often used interchangeably (ibid). Further, varying definitions of disability and subjective interpretations of what 'type' of child a teacher is willing to include in their classroom add to the confusion.

Even if a previously excluded child is given access to a mainstream classroom, what happens within that space can be anything but inclusive if the school quality is poor, they cannot access an inflexible curriculum, or they are ignored or bullied by the teacher or their peers. These children would be found in CREATE zone three. Tomasevski highlights how "…education is widely – albeit wrongly – perceived as inherently good. Getting all children to school is thus mistaken for their right to education." It is worth noting that the concept of inclusive education in the mainstream as opposed to specialist segregated provision is a matter of heated, inconclusive debate in the north, and yet it is seemingly being transferred unquestioningly as the panacea to the exclusion of children with disabilities in the south.

While in northern contexts (developed nations), the discourse around inclusive education is primarily concerned with segregation as opposed to inclusion in the mainstream, in the south the coverage of special schools is so limited that the discourse is concerned with inclusion being potentially the most cost and time-efficient way of improving access to educational institutions. It may be that the promotion by the World Bank and OECD of the cost-effectiveness of inclusion in the mainstream enabling both economic and social benefits may bear more relevance for resource-constrained governments and policy-makers than a child-rights approach.

Although inclusive education clearly has the potential to improve teaching and learning processes for all children as well as fulfilling their rights, for the purposes of this paper we will

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   103

be looking at inclusive education mostly in terms of access for children with disabilities in India due to their 'invisibilisation'.

Proportion

India has the second largest education system in the world, with 200 million children aged between 6 and 14, around 25 million of whom are out of school. However, bearing in mind that apparently only 35% of children are registered at birth, others estimate between 35 to 80 million out-of-school children.

When considering understanding of, approaches to, and impacts of inclusive education, the inevitable diversity and complexity in a context of this size must be taken into account. India's 1.3 billion people speak 18 different languages (GOI, 2002), and 844 dialects , worship varied religions, have unique customs, differ in their exposure to disease and access to types of nutrition which affect their health and socio-economic status, and also communications which influence their access to government resources such as education or healthcare.

Conceptual understandings of Inclusive Education in India

Although it may not be appropriate to judge the adoption of a northern concept in the south from a northern perspective, hasty use of such globalised terminology without engaging with the thinking behind it may present no more than empty rhetoric, whatever the context. Singal clearly perceives inclusive education as "…a concept that has been adopted from the international discourse, but has not been engaged with in the Indian scenario." Many interviewees concurred with the opinions reflected in government documents that inclusion is about children with special needs, as reflected by a disabling condition. A handful of others argue that inclusive education should not be limited to children with disabilities, as it holds relevance for all marginalised groups.

Indian understandings of disability and educational needs are demonstrated through the interchangeable use of several English terms which hold different meanings in the north. For example, children with special needs or special educational needs tend to be perceived as children with disabilities in India, as demonstrated by Mukhopadhyay and Mani's views on 'Education of Children with Special Needs' in a NIEPA government-funded research report,

which solely pertains to children with disabilities. In contrast, the intention of Mary Warnock's term 'special educational needs', coined in the UK in 1978, was to imply that any child, with an impairment or not, may have an individual educational need at some point in their school career (e.g. dyslexia, or language of instruction as a second language) which the teacher should adapt to. This further implies that a child with a disability may not have a special educational need while their able-bodied peers could.

In addition, despite the 1987 Mental Health Act finally separating the meaning of learning disability from that of mental illness in India, there is still some confusion in understanding, with the 1995 Persons with Disabilities Act listing both mental retardation and mental illness as categories of disability. Ignorance and fear of genetic inheritance adds to the societal stigma of both. 'Inclusive' and 'integrated' education are also concepts that are used interchangeably, understood as the placement of children with disabilities in mainstream classrooms, with the provision of aids and appliances, and specialist training for the teacher on how to 'deal with' students with disabilities. There is little engagement with the connotations of school, curriculum, and teacher flexibility for all children. These rigid, categorical interpretations of subtly different northern concepts are perhaps a reflection of not only the government tendency to categorise and label but also a cultural one, most explicitly enforced through the rigidly categorised caste system.

While it is easy to criticise the apparent lack of critical engagement with these terms in India, this is perhaps a reflection of the weakness of local disabled people's organisations' (DPOs) political voice which have had such an overt influence on the development of these concepts in the north. It may also reflect an unwillingness to engage with an understanding of social exclusion and the, "…barriers to entry and participation in the education system faced by children due to reasons other than impairment". However, it is worth noting that this political discourse has a 40 year plus history in the north, while it is relatively new in the south.

Government Programmes

Over the years, although government programmes such as Operation Blackboard and Lok Jumbish focused mainly on infrastructure, girls, scheduled caste and scheduled tribe children,

others had, or have, inclusive education components which ensure the visibility of children with disabilities.

Integrated Education for Disabled Children (IEDC)

The Ministry of Welfare, now Social Justice and Empowerment, implemented the Integrated Education for Disabled Children (IEDC) scheme from 1974 to 1982, when it transferred to the Department of Education. The scheme was apparently intended to encourage co-operation between mainstream and special schools in order to support integration, although Julka believes this co-operation did not happen. Singal too, argues that the programme is seen as an overall failure by those outside the government. Unfortunately, I was not able to access literature exploring these failures further, reflecting the need for valid and reliable data to enable improved project planning in the future. IEDC has been replaced by the Integrated Education for the Disabled (IED) component of the national District Primary Education Project (DPEP), and supports community mobilization and early detection, in-service teacher training, architectural design in schools (Mukhopadhyay, nd), the establishment of resource centres, teacher training, identification and assessment of children with disabilities, and the supply of specialist aids and appliances.

Project on Integrated Education for Disabled (PIED)

In 1987, UNICEF and the government-funded National Council of Educational Research and Training (NCERT) launched the Project on Integrated Education for Disabled (PIED) in 10 blocks (the administrative level between district and village (Thomas, 2005b)), that focused on teacher training in order to encourage integration. PIED was later amalgamated with the DPEP and SSA (see below) and by 2002 extended to 27 States.

While enrolment of children with disabilities in the mainstream increased and retention was high, coverage has been "miniscule" with only 2-3% of children with disabilities integrated in mainstream institutions. Criticisms made in the project evaluation pointed to implementation issues, such as children getting financial assistance who were not classified as disabled, or teacher training courses being un-regulated . However, the design of the project which encouraged continued labelling of children and withdrawal of those with disabilities from

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   106

particular activities in school was not highlighted. Further, despite aiming to deliver learner-centred teacher training courses, much of the course instruction was found to be traditionally formal hence failing in one of its key objectives of instigating change in pedagogy through teacher training.

District Primary Education Programme (DPEP)

The 1995 District Primary Education Programme (DPEP), funded 85% by Central government via a World Bank loan and support from the European Community, UNICEF and the UK and Netherlands governments, and 15% by the State governments, focused on the universalisation of primary education, particularly for girls. The intention was for district-specific planning to make the programme contextual, and for participatory processes to empower and build capacity at all levels (GOI, 2002). However, Kobayashi found that the programme focused on quantitative targets and educational administration capacity-building more than participation, hence failing to empower local communities, unlike Lok Jumbish. Children with disabilities were included with the aim of achieving EFA. Extensive construction led to the creation of 200,000 new schools, and a teacher-training component led to the in-service training of all teachers. Alur argues that there were failures not so willingly reported such as corruption in the form of budgets for non-existent non-formal education centres, tribal dropout, the difficulty of multigrade teaching in one-teacher schools, low learning achievement, and no integration for children with disabilities due to continued reliance on special school systems. However, it is arguable that the existence of special school systems does not necessarily obstruct locational integration in the mainstream. Due to a lack of data, it is not possible to confirm how many children with disabilities were, or were not, integrated under the auspices of DPEP.

Janshala

This community schools programme, started in 1998 and now replaced by SSA , was collaboration between the Government of India and the UNDP, UNICEF, UNESCO, the ILO, and UNFPA, and supported the government drive towards universal primary education. It covered 120, mainly rural, blocks in 9 States where there is evidence of low female literacy, child labour, and SC/ST children not catered for under DPEP. Unfortunately, due to limited

availability of data, it is not possible to elaborate on any issues arising on the Janshala programme, which has a component designed to improve the attendance of difficult to reach groups of children, including children with disabilities.

Sarva Shiksha Abhiyan (SSA)

Sarva Shiksha Abhiyan (SSA) is the government's millennial Education For All umbrella programme for all education schemes, which aims to universalise elementary education. The goals are that all children aged 6-14 i) will be in some form of education by 2003, ii) will complete 5 years' primary education by 2007, and iii) will complete 8 years' education by 2010 (GOI, 2002). Disability indicators are included in the government agreement for SSA , although what exactly these are and whether they are taken on at local level is unclear. In fact, although one of the official SSA objectives is the enrolment of children with disabilities, the World Bank, SSA project appraisal does not list disability as a key indicator, unlike gender, SC and ST.

The fact that there are still many children out-of-school in 2006 demonstrates not only how behind this programme already is, but also how over-ambitious the infrastructure-led SSA goals were in the first place. For example, of the 1 million new classrooms that should have been built by 2007, there are only 300,000; 100,000 of which are not fully functional. Part of the "compelling" rationale for World Bank assistance to SSA was the continuous monitoring and evaluation and the "built-in accountability mechanism at the school and community levels". With donor support of the government feedback system, it was hoped that, "the development of mechanisms to assure cross-state and cross district observation, dialogue, and learning for program refinement could be among SSA's most enduring features.". However, despite an awareness of SSA lagging so far behind in the achievement of its intended targets, there is apparently no sign of accelerated political momentum to lend a sense of urgency to the task. This is perhaps a reflection of there being "…no condition of effectiveness" in the World Bank interest-free loan contributing towards the funding of SSA .

With a planned central, state government budget ratio of 85:15 changing to 50:50 in 2007, there is a high risk of some states not being able to afford to finance the programme, and perhaps an accompanying weakening of political will and programme implementation. The lack

of political voice of the poorest people this programme is intended to assist, further pushes education to the lower strata of politicians' agendas. While criticism from the Indian media may be justified and necessary to raise awareness, it remains to be seen whether SSA will be able to adapt and become more effective over the next four years.

Civil society-response

There are many international, national, and local NGOs involved with disability issues in India. Many local NGOs, while diverse and widespread, tend to be based on a charity/welfare approach and informed by the medical model Hooja, cited in Mukhopadhyay, 2003). Although the exact number is unknown, there are at least 2,000 NGOs and voluntary organisations actively engaged in education, of which the government funded 701 with grants in aid in 2010.

NGOs are perceived by the government as widening the implementation network and bringing flexibility and innovation into education programmes. In fact, they are currently implementing much of the IEDC scheme, as the job of including children with disabilities in education nationwide is too vast for the government to be able to undertake alone. NGOs "are important stakeholders in social development programmes and are also a repository of knowledge of grassroots realities because of their proximity to the people". While demonstrating an awareness of the advantage of NGOs' closeness to the people, there is no hint of criticism of the government not being so, or why. In fact, it seems to assume and accept government distance in a nation of hierarchies. While failing to criticise the power processes that make the government need grass-root NGO assistance in the first place, this can also be understood as a pragmatic, honest approach, with the government admitting its failings and resource constraints by embracing NGOs. However, when part of the MSJE's mandate is the: "…promotion and development of voluntary effort on subjects allocated to this Ministry," one of which is the "education, training, rehabilitation and welfare of the physically and mentally handicapped", it can only serve to reinforce the charity/welfare approach that sustains a medical, deficit model of disability.

Many national and local NGOs support special institutions, perhaps because it is easier to raise public support for residential centres than the promotion of inclusive education. However, a

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   109

NGO that combines both specialist and inclusive aims is the National Association for the Blind. With branches nationwide, the NAB facilitates integration with skill and resource support . While it can be criticised for its roots in the medical model, it is important to remember that the specialist support they provide can assist with literacy (through Braille) and mobility (with a cane) for the mainstream classroom and beyond.

Some NGOs have metamorphosed their specialist institutions into resource centres in order to support inclusive education. For example, the Spastics Society of India (SSI) advocates for better understanding that many children with cerebral palsy do not have learning disabilities. The head office has also become a 'National Resource Centre for Inclusion' funded by the Canadian International Development Agency, CIDA for all children marginalised from learning, including girls and working children, operating inclusive pre-school classrooms in Mumbai's slum areas. In addition, they offer a postgraduate diploma in inclusive education among other courses, in order to clarify this much-misunderstood concept. However, SSI's impact is currently mostly limited to the cities of Mumbai, Bangalore and Chennai. Similarly, the Jesuit-run Divine Light Trust for the Blind near Bangalore has become a resource centre to train teachers in mainstream schools in order to encourage the inclusion of blind children in their classrooms.

Conclusion

The teacher education focus of some government programmes is perhaps going in the right direction. However, the apparently slight regard for content and methodology of the courses, which do not reconceptualise IE or address attitudes towards disability, demonstrates the need for further change in this context. Also, teachers are not the only stakeholders involved. Students, parents, administrators and local government officials are affected too, all of whom will see any innovation or new concept in a different light. However, the reconceptualization of IE as whole school issue appears to be essential if IE is to be more than physical relocation of children with disabilities in a mainstream classroom.

While only 2.5-6% of the population may have a disability, with approximately 98% of children with disabilities not attending any type of educational institution, the current provision (specialist or mainstream, government or NGO is clearly not enough to attain EFA. This may

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13 : 2 February 2013
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Editors: P. Udayakumar, M.Sc., M.Phil., M.Ed., M.A., Ph.D. Candidate,
Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   110

partly explain why inclusive education is perceived by some as inevitability rather than a policy preference, because resources cannot stretch to the number of special schools and specialist teachers that would be needed to cater for this excluded group. However, although children with disabilities are unlikely to suffer from only one exclusionary dimension, they are often excluded from programmes for girls, or SC, ST or OBC students, further reinforcing their marginalisation from society. Human resource potential aside, without education marginalised children may not be able to fulfil their rights as citizens in the largest democracy in the world.

This suggests that the twin-track approach advocated by DFID, may be a constructive way forward for the inclusion of children with disabilities in the Indian education system. While some programmes could focus specifically on educational provision for children with disabilities, others could mainstream disability alongside gender and other exclusionary dimensions such as poverty. This would ensure the inclusion of all in programmes intended to widen the impact of institutional systems such as education. With the development of much-needed research into the inclusive education discourse and the implementation and outcomes of IE policy, reconceptualization of inclusive education as a whole school quality issue for all children may be able to grow alongside this merging of agendas. Thus, EFA and the Fundamental Right to education for all children as declared by the 86th Constitutional amendment in 2002 may be fulfilled in the long-term through the improved implementation of inclusive.

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End Notes

1.   Alur, M., Education and Children with Special Needs: from Segregation to Inclusion, New Delhi: Sage Publications, 2010, p.57.

2. Falmer Giffard-Lindsay, K. What does a social exclusion approach offer the drive for Education For All in China? MA International Education term paper, University of Sussex, 2005, p.34

Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   111

3. Giffard-Lindsay, K. The Educational Inclusion Experiences of a blind student in mainstream primary school in England, 1999-2006, MA International Education research paper, University of Sussex , 2006,p.23

4. Balagopalan, S. & Subrahmanian, R. Dalit and Adivasi Children in Schools: Some Preliminary Research Themes and Findings, in IDS Bulletin, 34 (1), Falmer: Institute of Development Studies2011.

5. Dasgupta, P. R. Education for the Disabled, in Hegarty, S. & Alur M. (eds) Education and Children with Special Needs: from Segregation to Inclusion, New Delhi: Sage Publications, 2002, p.234.

6. Ibid

7. Dyer, C. Operation Blackboard: Policy Implementation in Indian Elementary Education, Oxford: Symposium Books ESCAP (2001) Pathfinders: Towards Full Participation and Equality of Persons with Disabilities in the ESCAP Region, Part Three, Chapter IX: Integrated Education in Gujarat, 2000, p. 52

8. Booth, T., Nes, K., & Stromstad, M. Developing inclusive teacher education: Drawing the book together, in Booth, T., Nes, K., & Stromstad, M. Developing Inclusive Teacher Education, London: Routlege Falmer, 2003, p.245

9. GOI (2000) India: Education For All Year 2000 Assessment, Ministry of Human Resource Development, New Delhi: Government of India and NIEPA,p.23

10. GOI (2002) India 2002: A Reference Annual, Publications Division, Ministry of Information and Broadcasting, New Delhi: Government of India,p.45

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   112

11. GOI (2003) Annual Report 2002-2003, Department of Elementary Education and Literacy, Department of Secondary and Higher Education, Ministry of Human Resource Development, New Delhi: Government of India,p.12

12. GOI (2005) Ministry of Social Justice and Empowerment Annual Report 2004-05, New Delhi: Government of India,p.76

13. Jangira, N. K. (2002) Special Educational Needs of Children and Young Adults: An Unfinished Agenda, in Hegarty, S & Alur M (eds) (2002) Education and Children with Special Needs: from Segregation to Inclusion, New Delhi: Sage Publications, p.123.

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   113

MultipleIntelligence

R. Vendhan

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Introduction

      The theory of multiple intelligences was proposed by Howard Gardner in 1983 as a model of intelligence that differentiates intelligence into various specific modalities, rather than seeing it as dominated by a single general ability. He argues that there is a wide range of cognitive abilities, and that there are only very weak correlations among them. For example, the theory predicts that a child who learns to multiply easily is not necessarily generally more intelligent than a child who has more difficulty on this task. The child who takes more time to master simple multiplication 1) may best learn to multiply through a different approach, 2) may excel in a field outside of mathematics, or 3) may even be looking at and understanding the multiplication process at a fundamentally deeper level, or perhaps as an entirely different process. Such a fundamentally deeper understanding can result in what looks like slowness and can hide a mathematical intelligence potentially higher than that of a child who quickly memorizes the multiplication table despite a less detailed understanding of the process of multiplication.

      The theory has been met with mixed responses. Traditional intelligence tests and psychometrics have generally found high correlations between different tasks and aspects of intelligence, rather than the low correlations which Gardner's theory predicts. Nevertheless many educationalists support the practical value of the approaches suggested by the theory.

Life History of Howard Gardner

      Howard Earl Gardner (born July 11, 1943 in Scranton, Pennsylvania) is an American developmental psychologist who is a professor of Cognition and Education at Harvard Graduate School of Education at Harvard University, Senior Director of Harvard Project Zero

and author of over twenty books translated into thirty languages. He is the son of Ralph Gardner and Hilde Weilheimer (Hilde Gardner since her marriage to Ralph Gardner). Since 1995, he has been the co-director of the Good Work Project. He is best known for his theory of multiple intelligences. He received the Prince of Asturias Award 2011 in Social Sciences for the development of this theory.

What Are Multiple Intelligences?

Multiple intelligences states not only do human beings have several different ways of learning and processing information, but these methods are relatively independent of one another: leading to multiple "intelligences" as opposed to a general intelligence factor among correlated abilities. Since 1999, Gardner has identified eight intelligences: linguistic, logic-mathematical, musical, spatial, bodily/kinesthetic, interpersonal, intrapersonal, and naturalistic. Gardner is still considering a ninth, or existential intelligence (the intelligence of "big questions"), but has not, as yet, added it. He thinks it will have something to do with seeing what you're working with.

When you hear the word intelligence, the concept of IQ testing may immediately come to mind. Intelligence is often defined as our intellectual potential; something we are born with, something that can be measured and a capacity that is difficult to change. In recent years, however, other views of intelligence have emerged. One such conception is the theory of multiple intelligences proposed by Harvard psychologist Howard Gardner.

This theory suggests that traditional psychometric views of intelligence are too limited. Gardner first outlined his theory in his 1983 book Frames of Mind: The Theory of Multiple Intelligences, where he suggested that all people have different kinds of "intelligences."[1]Gardner proposed that there are eight intelligences, and has suggested the possible addition of a ninth known as "existentialist intelligence"[2].

In order to capture the full range of abilities and talents that people possess, Gardner suggests that people do not have just a intellectual capacity, but have many different intelligences including musical, interpersonal, spatial-visual and linguistic intelligences[3]

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   115

While a person might be particularly strong in a specific area, such as musical intelligence, they most likely possess a range of abilities. For example, an individual might be strong in verbal, musical and naturalistic intelligence.

Gardner's theory has come under criticism from both psychologists and educators. These critics argue that Gardner's definition of intelligence is too broad, and that his eight different "intelligences" simply represent talents, personality traits and abilities. Gardner's theory also suffers from a lack of supporting empirical research[4].

Howard Gardner's Multiple Intelligence

Gardner articulated several criteria for a behavior to be an intelligence. These were that the intelligences:

1. Potential for brain isolation by brain damage,

2. Place in evolutionary history,

3. Presence of core operations,

4. Susceptibility to encoding (symbolic expression),

5. A distinct developmental progression,

6. The existence of savants, prodigies and other exceptional people,

7. Support from experimental psychology and psychometric findings.

He initially formulated a list of seven intelligences. His listing was provisional. The first two have been typically valued in schools; the next three are usually associated with the arts; and the final two are what Howard Gardner called 'personal intelligences' they are,

Linguistic Intelligence

It involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. This intelligence includes the ability to effectively use language to express oneself rhetorically or poetically; and language as a means to remember information. Writers, poets, lawyers and speakers are among those that Howard Gardner sees as having high linguistic intelligence.

Logical-mathematical Intelligence

It consists of the capacity to analyze problems logically, carry out mathematical operations, and investigate issues scientifically. In Howard Gardner's words, it entails the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking.

Musical Intelligence

It involves skill in the performance, composition, and appreciation of musical patterns. It encompasses the capacity to recognize and compose musical pitches, tones, and rhythms. According to Howard Gardner musical intelligence runs in an almost structural parallel to linguistic intelligence.

Bodily-kinesthetic Intelligence

It entails the potential of using one's whole body or parts of the body to solve problems. It is the ability to use mental abilities to coordinate bodily movements. Howard Gardner sees mental and physical activity as related.

Spatial Intelligence

It involves the potential to recognize and use the patterns of wide space and more confined areas.

Interpersonal Intelligence

It is concerned with the capacity to understand the intentions, motivations and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders and counselors all need a well-developed interpersonal intelligence.

Intrapersonal Intelligence

It entails the capacity to understand oneself, to appreciate one's feelings, fears and motivations. In Howard Gardner's view it involves having an effective working model of ourselves, and to be able to use such information to regulate our lives.

Alternative Ways of Thinking

The response to Howard Gardner is paralleled by the adoption of Kolb's model of experiential learning by adult and informal educators. While significant criticism can be made of the formulation it does provide a useful set of questions and 'rules of thumb' to help educators to think about their practice. The way in which Howard Gardner's theory of multiple intelligences has been translated into policy and practice has been very varied. Howard Gardner did not, initially, spell out the implications of his theory for educators in any detail. Subsequently, he has looked more closely at what the theory might mean for schooling practice. From this work three particular aspects of Gardner's thinking need noting here as they allow for hope, and an alternative way of thinking, for those educators who feel out of step with the current, dominant product orientation to curriculum and educational policy.

A Broad Vision of Education

All seven intelligences are needed to live life well. Teachers, therefore, need to attend to all intelligences, not just the first two that have been their tradition concern. As Kornhaber has noted it involves educators opting 'for depth over breadth'. Understanding entails taking knowledge gained in one setting and using it in another. 'Students must have extended opportunities to work on a topic'.

Developing Local and Flexible Programmers.

Howard Gardner's interest in 'deep understanding', performance, exploration and creativity are not easily accommodated within an orientation to the 'delivery' of a detailed curriculum planned outside of the immediate educational context. 'An "MI setting" can be undone if the curriculum is too rigid or if there is but a single form of assessment'. In this respect

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   118

the educational implications of Howard Gardner's work stands in a direct line from the work of John Dewey.

Looking to Morality

'We must figure out how intelligence and morality can work together', Howard Gardner argues, 'to create a world in which a great variety of people will want to live'. While there are considerable benefits to developing understanding in relation to the disciplines, something more is needed.

Additional Intelligences

Since Howard Gardner's original listing of the intelligences in Frames of Mind, there has been a great deal of discussion as to other possible candidates for inclusion. Subsequent research and reflection by Howard Gardner and his colleagues has looked to three particular possibilities: a naturalist intelligence, a spiritual intelligence and an existential intelligence. He has concluded that the first of these 'merits addition to the list of the original seven intelligences'.

Naturalist Intelligence

It enables human beings to recognize, categorize and draw upon certain features of the environment. It 'combines a description of the core ability with a characterization of the role that many cultures value'.

Spiritual Intelligence

It is far more complex. According to Howard Gardner there are problems, for example, around the 'content' of spiritual intelligence, its privileged but unsubstantiated claims with regard to truth value, 'and the need for it to be partially identified through its effect on other people'. It seems more responsible to carve out that area of spirituality closest 'in spirit' to the other intelligences and then, in the sympathetic manner applied to naturalist intelligence, ascertain how this candidate intelligence fares. In doing so, I think it best to put aside the term spiritual, with

its manifest and problematic connotations, and to speak instead of an intelligence that explores the nature of existence in its multifarious guises. Thus, an explicit concern with spiritual or religious matters would be one variety - often the most important variety - of an existential intelligence.

Existential Intelligence

It is a concern with 'ultimate issues', is, thus, the next possibility that Howard Gardner considers - and he argues that it 'scores reasonably well on the criteria'. However, empirical evidence is sparse - and although a ninth intelligence might be attractive, Howard Gardner is not disposed to add it to the list. 'I find the phenomenon perplexing enough and the distance from the other intelligences vast enough to dictate prudence - at least for now'.

Moral Intelligence

In his exploration, he begins by asking whether it is possible to delineate the 'moral domain'. He suggests that it is difficult to come to any consensual definition, but argues that it is possible to come to an understanding that takes exploration forward. Central to a moral domain, Howard Gardner suggests, 'is a concern with those rules, behaviors and attitudes that govern the sanctity of life - in particular, the sanctity of human life and, in many cases, the sanctity of any other living creatures and the world they inhabit'. If we accept the existence of a moral realm is it then possible to speak of moral intelligence? If it 'connotes the adoption of any specific moral code' then Howard Gardner does not find the term moral intelligence acceptable. Furthermore, he argues, researchers and writers have not as yet 'captured the essence of the moral domain as an instance of human intelligence'.

One's Behavior towards Others

As he construe it, the central component in the moral realm or domain is a sense of personal agency and personal stake, a realization that one has an irreducible role with respect to other people and that one's behavior towards others must reflect the results of contextualized

analysis and the exercise of one's will. The fulfillment of key roles certainly requires a range of human intelligences, including personal, linguistic, logical and perhaps existential - but it is fundamentally a statement about the kind of person that has developed to be. It is not, in itself, an intelligence. 'Morality' is then properly a statement about personality, individuality, will, character and, in the happiest cases, about the highest realization of human nature.

Conclusion

While there may be some significant questions and issues around Howard Gardner's notion of multiple intelligences, it still has had utility in education. It has helped a significant number of educators to question their work and to encourage them to look beyond the narrow confines of the dominant discourses of skilling, curriculum, and testing. For example, Mindy Kornhaber and her colleagues at the Project SUMIT (Schools Using Multiple Intelligences Theory) have examined the performance of a number of schools and concluded that there have been significant gains in respect of SATs scores, parental participation, and discipline (with the schools themselves attributing this to MI theory). To the extent that Howard Gardner's multiple intelligences theory has helped educators to reflect on their practice, and given them a basis to broaden their focus and to attend to what might assist people to live their lives well, then it has to be judged a useful addition.

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   121

Basic Work Skills among Visually Impaired Children – An Intervention Strategy

G. Victoria Naomi
Minatirani Mohapatra

===

Vision loss restricts a child's perception of an object or activity. Opportunities for manipulation and exploration objects should be given. Each activity should be demonstrated to the child. In order to learn about the world, a child with visual impairments needs experience with real objects. It is not meaningful to provide a non-stop verbal description of everything that is happening all of the time. Oral instruction is the predominant method of teaching blind children in almost all types of educational programmes. This system of instruction though helps their rote memorization deprives them acquiring livelihood skills hampering their employment prospects and quality life.

The greatest concern among professionals in the field of special education is to offer life coping skills to face the employment challenges when they grow. The work skill training is completely neglected in the educational programmes.

This necessitated the investigators to pursue a research titled 'Basic Work Skills among Visually Impaired Students – An Intervention Strategy' with the following objectives:

- To find out the work skills performance visually impaired and Low Vision children
- To compare the mean scores of visually impaired children studying in the special school and inclusive school.
- To prepare and use work skill Package and find out its efficiency.

Methodology

The present study was conducted in the School for the Blind, Palayamkottai, Tirunelveli and five Inclusive schools in Coimbatore district of Tamilnadu. The present study was experimental in nature designed in terms pre and posttest single group design and planned to conduct the study among visually impaired students of residential and inclusive school. The investigator adopted purposive sampling technique to select the sample. In this study, the sample comprised of 64 children belonging to class VI - IX .of these 64 children, 32were boys and 32 girls.

Design of the Study

The present study adopted pre and posttest single group design. In this study, pre observation was made; treatment given to the group and after treatment, post observation was made. The design is as follows.

$$O_1 \quad * \quad O_2$$

Here O_1 indicates pre experiment observation, O_2 indicates post experiment observation and X represents the treatment (intervention)

Tools

The present study intended to study the existing basic work skills of visually impaired children and plan a programme developing a package to teach basic work skills of children studying at residential and inclusive school. After reviewing the literature and the standardized tools available, the investigators developed their own tools suitable to Indian context. Experts' opinion was sought to finalize the tools. The following is the description of the tools developed.

Checklist to Assess the Basic Work Skills –level- I

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   123

This ’Yes’ or ‘No’ checklist was prepared to assess the children‘s knowledge about the concept of basic work skills. It includes demonstrating complete three aspects namely i) use of stapler, ii) use of punching machine, iii) tying the paper as in the examination Hence one score was given for each aspect and thus making a total of 5 score

Checklist to assess the work skills – level- 2

A checklist with ‘Yes’ or ‘No’ option was developed to assess the basic work skills considered under Level II skills. Namely i) use of office file, ii) use of cover file, iii) use of stick file, iv) use of certificate file and v) use of ball pin. For each skill, when the performance is correct, the child will be awarded one score.

Checklist to assess the work skills- level- 3

A checklist with ‘Yes’ or ‘No’ option was developed to assess the basic work skills which are considered as Level III skills. In this area, there are five skills which include i) using book mark ii) using writing board, iii) using scale and pencil, iv) using scissor and v) pasting. For each correct performance, one score was given and zero score for wrong response.

Checklist to assess the work skills- level- 4

A checklist with ‘Yes’ or ‘No’ option was developed to access the components Level IV. This includes i) using measuring tape, (ii) using threader; (iii) using hammer, (iv) using screw driver and (v) using signature guide. For each correct performance, one score and non performance zero score is given.

Basic Work Skills Assessment Kit

The table below shows the assessment kit used for the study.

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   124

S. No.	Basic Work Skills	Objects Involved
1	Using stapler	Stapler small, middle, paper
2	Using big stapler	Big stapler, paper
3	Using single punching machine	Single punching machine,paper
4	Tieing	Punched paper & tag
5	Using double punching machine	Double punching machine, paper
6	Using office file	Office file, paper
7	Using cover file	Cover file, paper
8	Using stick file	Stick file, paper
9	Using certificate file	Certificate file, paper
10	Using ball pin	Ball pin, paper
11	Using bookmark	Bookmark paper
12	Using writing board	Writing board, paper, pencil
13	Using scale and pencil	Scale, pencil, paper
14	Cutting	Scissors: small, middle, big
15	Pasting	Paper, gum
16	Using measuring tape	Measuring tape
17	Using threading machine	Threader & neddle
18	Using hammer	Hammer, wood board , nails
19	Using screw driver	Screw drivers, screws
20	Using signature guide	Signature guide

The study involved assessment checklist for each level of work skills besides the work skill package developed. After pretesting, intervention was given for a period of two months to train them in the work skills and after that posttest was conducted using the same tool administered in the pretest. Relevant statistical procedures were used to analyze and interpret the data.

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   125

Findings

1. The study result revealed that students with blindness and low vision acquired work skills after intervention when comparing the pre mean(1.58) and the post mean (4.63) scores.

2. The selected students showed improvement in all the skills ranging from Level I to level IV.

3. the Totally Vision Impaired Students showed significant improvement after training (Pre Mean 7.69 and Post Mean 17.44)

4. Similar to the findings of Totally Vision Impaired Students, the Low vision students also secured higher score and thus exhibiting the efficacy of intervention.

5. Pertaining to analysis of grade scores, the posttest score was higher (M=6.91) then the pretest mean (M = 6.38) in both the groups. However Grade did not influence the work skill performance

6. The students in residential and inclusive schools exhibited improved performance in the work skills after intervention.

7. In comparing school wise analysis, type of schools did not influence in all the four level work skills performance. Students in both the schools showed to be at the same level of performance in both pre and posttest.

Conclusion

The real problem of blindness is not the loss of eyesight. The real problem is the misunderstanding and lack of information that exist. If a blind person has proper training and opportunity, blindness can be reduced to a physical nuisance. In the present scenario, education is examination or mark oriented among all students. The demand in the educational set up hampers the holistic development of an individual. But the same scenario is seen in the

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   126

educational set up for the visually impaired students. The sighted students, however with their visual ability acquire many references to increase the work skills and employability skills. But for the visually impaired children, the teachers are the only reference at their younger age. If they do not address this crucial area of development, this will certainly impact their life skills when they grow adult resulting poor integration in the society and eventually affect their independency and dignity of life. This study proved that basic work skills can be easily imparted with indigenous items and techniques to visually impaired students.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   127

M-Learning

N. Kavitha, MCA., M.Ed.

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ABSTRACT

The term **M-Learning**, or "mobile learning", has different meanings for different communities. Although related to e-learning and distance education, it is distinct in its focus on learning across contexts and learning with mobile devices. One definition of mobile learning is: *Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner 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.

DEFINING MOBILE LEARNING

Mobile learning can perhaps be defined as 'any educational provision where the sole or dominant technologies are handheld or palmtop devices'. This definition may mean that mobile learning could include mobile 'phones, smart phones, personal digital assistants (PDAs) and their peripherals, perhaps tablet PCs and perhaps laptop PCs, but not desktops in carts and other similar solutions. Perhaps the definition should address also the growing number of experiments with dedicated mobile devices such as games consoles and iPODs, and it should encompass both mainstream industrial technologies and one-off experimental technologies.

The term covers: learning with portable technologies including but not limited to handheld computers, MP3 players, notebooks and mobile phones. M-learning focuses on the mobility of the learner, interacting with portable technologies, and learning that reflects a focus on how society and its institutions can accommodate and support an increasingly mobile population.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   128

There is also a new direction in M Learning that adds mobility of the instructor and includes creation of learning materials "on-the-spot, "in the field" using predominately smart phone with special software such as AHG Cloud Note. Using mobile tools for creating learning aides and materials becomes an important part of informal learning.

M-learning is convenient in that it is accessible from virtually anywhere. M-Learning, like other forms of E-learning, is also collaborative; 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 RAMs, filled with tailored learning contents. In addition, it is simple to utilize mobile learning for a more effective and entertaining experience.

Technologies

Mobile devices and personal technologies that can support mobile learning, include:
- E-book
- OutStart,_Inc.
- Handheld audio and multimedia guides, in museums and galleries
- Handheld game console, modern gaming consoles such as Sony PSP or Nintendo DS
- Personal audio player, e.g. for listening to audio recordings of lectures (podcasting)
- Personal Digital Assistant, in the classroom and outdoors
- Tablet computer
- UMPC, mobile phone, camera phone and SmartPhone

Technical and delivery support for mobile learning:
- 3GP For compression and delivery method of audiovisual content associated with Mobile Learning
- GPRS mobile data service, provides high speed connection and data transfer rate

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   129

- <u>Wi-Fi</u> gives access to instructors and resources via internet

Analysis (costs / benefits, forecast)

Value

The value of mobile learning --Tutors commented on the value of mobile learning as follows.
- It is important to bring new technology into the classroom.
- It will be more light weight device compare to books, PCs, etc.
- Mobile learning could be utilised as part of a learning approach which uses different types of activities (or a blended learning approach).
- Mobile learning supports the learning process rather than being integral to it.
- Mobile learning needs to be used appropriately, according to the groups of students involved.
- Mobile learning can be a useful add-on tool for students with special needs. However, for SMS and MMS this might be dependent on the students' specific disabilities or difficulties involved.
- Good IT support is needed.
- Mobile learning can be used as a 'hook' to re-engage disaffected youth.
- It is necessary to have enough devices for classroom use .

Challenges

Technical challenges include
- Connectivity and battery life
- Screen size and key size
- Ability for authors to visualize mobile phones for delivery
- Possibilities to meet required <u>bandwidth</u> for nonstop/fast streaming
- Number of file/assets' formats supported by a specific device
- Content security or copyright issue from authoring group

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   130

- Multiple standards, multiple screen sizes, multiple operating systems
- Reworking existing e-Learning materials for mobile platforms

Social and educational challenges include

- Accessibility and cost barriers for end users: Digital divide.
- How to assess learning outside the classroom
- How to support learning across many contexts
- Content's security (or) pirating issues
- Frequent changes in device models/technologies/functionality etc.
- Developing an appropriate theory of learning for the mobile age
- Conceptual differences between e- and m-learning
- Design of technology to support a lifetime of learning
- Tracking of results and proper use of this information
- No restriction on learning timetable
- Personal and private information and content
- No demographic boundary
- Disruption of students' personal and academic lives
- Access to and use of the technology in developing countries

Growth

Over the past ten years mobile learning has grown from a minor research interest to a set of significant projects in schools, workplaces, museums, cities and rural areas around the world. The m Learning community is still fragmented, with different national perspectives, differences between academia and industry, and between the school, higher education and lifelong learning sectors.

Current areas of growth include:

- Testing, surveys, job aids and just-in-time (J.I.T.) learning

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13 : 2 February 2013
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- Location-based and contextual learning
- Social-networked mobile learning
- Mobile educational gaming
- Deliver M-Learning to cellular phones using two way SMS messaging and voice-based Cell Casting (pod casting to phones with interactive assessments)

According to a report by Ambient Insight in 2008, "the US market for Mobile Learning products and services is growing at a five-year compound annual growth rate (CAGR) of 21.7% and revenues reached $538 million in 2007. The data indicate that the demand is relatively immune from the recession."[10] The findings of the report indicate that the largest demand throughout the forecast period is for custom development services, content conversion, and media services and that the healthcare sector accounts for 20% of the total US market for mobile learning.

Future

Technologies currently being researched for mobile learning include
- Location aware learning
- Point-and-shoot learning with camera phones and 2D codes
- Near Field Communications (NFC) secure transactions
- Sensors and accelerometers in mobile devices in behavioral based learning
- Mobile content creation (including user generated content)
- Games and simulation for learning on mobile devices
- Context-aware ubiquitous learning
- Augmented reality on mobile devices

Approaches

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   132

The use of mobile learning in the military is becoming increasingly common due to low cost and high portability.

In the classroom

- Students using <u>handheld computers</u>, <u>PDAs</u>, <u>smart phones</u> or handheld voting systems (such as <u>clickers</u>) in a classroom or lecture room (<u>Tremblay 2010</u>).
- Students using mobile devices(such as a Pocket PC) in the classroom to enhance group collaboration among students and instructors.

Blended learning

Mobile learning can provide support that enhances training in a corporate business or other classroom environment.

Class management

The mobile phone (through text <u>SMS</u> notices) can be used especially for distance education or with students whose course requires them to be highly mobile and in particular to communicate information regarding availability of assignment results, venue changes and cancellations, etc. It can also be of value to business people, e.g. <u>sales representatives</u> who do not wish to waste time away from their busy schedules to attend formal training events.

Pod casting

<u>Pod casting</u> consists of listening to audio recordings of lectures, and can be used to review live lectures and to provide opportunities for students to rehearse oral presentations. Pod casts may also provide supplemental information to enhance traditional lectures

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   133

Psychological research suggests that university students who download podcast lectures achieve substantially higher exam results than those who attend the lecture in person, but only in cases in which students <u>take notes</u>.

Pod casts may be delivered using <u>syndication</u>, although this method of delivery is not always easily adopted

Outdoor

- Learning in museums or galleries with handheld or wearable technologies
- Learning outdoors, for example on field trips.
- Continuous learning and portable tools for military personnel.

At work

- On the job training for someone who accesses training on a mobile device "just in time" to solve a problem or gain an update.

Lifelong learning and self-learning

The use of personal technology to support informal or lifelong learning, such as using handheld dictionaries and other devices for language learning.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   134

Mobile technologies and approaches, i.e. <u>Mobile Assisted Language Learning</u> (MALL), are also used to assist in <u>language learning</u>. For instance handheld computers, cell phones, but also <u>podcasting</u> have been used for helping people to acquire a language.

Other

- Improving levels of literacy, numeracy and participation in education amongst young adults.
- Using the communication features of a mobile phone as part of a larger learning activity (e.g.: sending media or texts into a central portfolio, or exporting audio files from a learning platform to your phone)

Technologies

Mobile devices and personal technologies that can support mobile learning, include:

- <u>E-book</u>
- <u>OutStart,_Inc.</u>
- <u>Handheld audio and multimedia guides</u>, in museums and galleries
- <u>Handheld game console</u>, modern gaming consoles such as Sony PSP or Nintendo DS

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   135

- Personal audio player, e.g. for listening to audio recordings of lectures (podcasting)
- Personal Digital Assistant, in the classroom and outdoors
- Tablet computer
- UMPC, mobile phone, camera phone and SmartPhone

Technical and delivery support for mobile learning:
- 3GP For compression and delivery method of audiovisual content associated with Mobile Learning
- GPRS mobile data service, provides high speed connection and data transfer rate
- Wi-Fi gives access to instructors and resources via internet

Authoring:
- Learning Mobile Author, e.g. for authoring and publishing WAP, Java ME and Smartphone

Mobile learning could be used for:
1. **Activating knowledge** before a classroom (or virtual classroom or even an eLearning session);
2. **Summarizing** (after one of those sessions – delivered soon after the session);
3. **Recall** (or reactivating knowledge – probably a week or two after the session. This ensures key concepts are revisited and helps in transferring the new knowledge to long term memory – especially for learners who may not get a chance to apply new knowledge immediately after the sessions);
4. **Providing application opportunities** (through pop quizzes or learning games on mobile);
5. **Just-in-time search support** by letting employees search in company's knowledge databases (wikis, blogs, forums) using their mobiles.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   136

We believe mobile learning is becoming a key component of the blended learning mix. Take a look at a sample blended mix that we proposed to one of our clients in past.

M Learning Advantages

Cutting edge information and communication technology (ICT) can most often be found employed within gaming, movies or other sectors of the entertainment industry. It generally takes 12-18 months for its adoption to cross over into mainstream industry learning applications (E. Masie, 2004. pers comm, 28 July). This mainstream industry adoption has been emerging over the last few years with some positive results. This article proposes four major advantages that can be gained from mLearning to a greater degree, or more easily than any other learning methods. The advantages are: access, context, collaboration, and appeal.

Access

The most obvious advantage of an mLearning environment is the ability to access information where it would not be possible without a mobile device. The salesman on the way to meet a client, the worker sitting on public transport, the emergency services Personnel on the street and the list of examples goes on. But how much would modern society actually use this facility if it were available. The increased requirement to undertake personal learning to maintain a competitive advantage in the global economy has resulted in the average adult spending 15 hours per week conducting deliberate personal learning. Considering those 15 hours per week are not conducted at regular times or in regular places the potential use is considerable. That potential is likely to increase as the information age accelerates. People will need to be able access information faster and more effectively if they are to increase their employability, business success, personal fulfilment and social development.

mLearning provides people with the opportunity to access information where it would previously have been impossible. This access advantage is not limited to time and location. The devices

137

required to access mobile networks are relatively inexpensive compared to desktop or laptop computers. This reduced expense can make access to this learning available to people who otherwise could not afford it. Extensible Markup Language (XML) in the future could (if not XML then another similar markup language) allow those people, who only have mobile devices, to access a considerable proportion of the content and learning materials on the Internet. XML is a vendor, application and platform independent language that defines data and can be easily exchanged between systems and hardware. XML also has significant advantages with regard to data reuse and re-purpose. By applying the appropriate style sheet the same data can be displayed in any number of systems or hardware types

Context

There has been considerable research into the advantages provided by placing the learning situation into the work or application situation The research revolves around the ideals that meaningful learning will not occur unless it is anchored in an authentic task where the learner can experiment, make mistakes and learn.

The main types of mobile devices used in the education process are:

• **NoteBook computers**. From one hand they have such abilities as desktop personal computer; from the other hand they have small sizes and support wireless communications. Their prices are still high.

• **Tablet PC**. These are one of the newest mobile devices. They also have full range of abilities as personal computers. Some of them haven't keyboard but have software to recognise handwritten text. It is relatively expensive.

• **Personal Digital Assistant (PDA)**. They have small sizes and significant processor power. New models support more than 65000 colors, recognise handwritten text and can play different types of multimedia files. The main

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   138

operating systems used are Palm and Microsoft Pocket PC.

• **Cellular phones**. The low class devices mainly can be used for voice communication and sending and receiving of text messages (SMS). Some of their disadvantages are low memory capacity and low data transfer rate. The cellular phones from the higher class can be used to Internet access via WAP or GPRS technologies. They also can be used to send and receive the multimedia messages (MMS). Their prices continuously decrease.

• **Smart Phones**. They are hybrid devices which combine the abilities of cellular phones and PDA. They have smaller sizes than PDA and bigger than cellular phones. Typically they haven't full sized keyboard and can recognizes handwritten text. They use Symbian, Windows Mobile or other operating system. As they have Internet browsers they have potentiality to be successfully used in the mobile multimedia education.

CONCLUSION

This paper attempts to summarize the factors that will influence our understanding of mobile learning in the coming years. This understanding will itself influence the progress and direction of mobile learning and its perception and acceptance by the wider educational community. The definition and depiction of mobile learning as 'merely' portable e-learning is a gradualist position which will ease its diffusion but weaken its contribution whereas the definition and depiction of mobile learning as something wholly new and distinct is a radical position that will make diffusion and acceptance more problematic but maintain its identity and coherence. What we have not considered here is the extent to which mobile learning could draw on discourses outside e-learning.

As we progress through the 21st Century, and the already hectic pace of our lives increases, society will need to find faster and more inventive ways to utilise previously unproductive time. Lifelong learning will be essential for maintaining a competitive

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   139

advantage in the global economy, for personal growth, and for simply functioning efficiently in an increasingly technological environment. With an increasing requirement to conduct learning activities independently, the ability to read and comprehend, and to metacognitively analyse and understand our learning processes, will be key factors in our successful development and our ability to function in the 21st century. These requirements and skills can be improved through the use of mLearning. It provides access to learning during previously unproductive times, it allows more flexible and immediate collaborative options, it allows controlled learning in contextual situations, and provides greater options for teachers to observe and assist in independent learning.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   140

Recent Trends in Educational Innovation
Education for All –
Students' Attitude

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Abstract

High attitude always plays vital role in everyone's life, so here I am going to explain more about attitude in precise "students attitude" which exist in the education system. In the mean time I also want to bring up few glimpses in the education system which I had in the past. When we were studying there was no much freedom given to the students in all aspects. However this generation kids are right opposite, they get immense freedom and good quality education. But then "All that glitters is not gold" due to few kids who take things for granted the whole system and attitude affects the other as well. We definitely need to look in to this. Here we go….

Introduction

At present I feel this topic is very much important in education system. There are lot of themes had given to use for the paper presentation, However as soon as, I saw this theme "Education for all" it made me feel so happy, since I am in this field for past 17 years, so I know more about students' attitude, and also in recent time's educational institution also facing lot of challenges from students. So that is the reason why I have chosen this topic.

Definition

G.W. Allport defines attitude as "a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."

Putting in a nutshell we can say attitudes are learned predispositions towards different specific aspects of our environment like persons, objects, issues, institutions etc. They may be positively or negatively related,

Characteristics of attitude

Special characteristics with regard to the attitudes of students

Attitudes are one of the important attributes of human behavior most of the time our behavior is too much coloured and affected with the type of attitude-positive, negative or indifferent, we have towards a thing (ideas, person or object) existing in our environment.

(1) Attitudes related to idealism

Students are the age of action. A student boy or girl is a reformist, and change seeker by nature. Accordingly we may see the students to exhibit an attitude of selfless idealist. They may have this inner wish to serve others, to help the needy in troubles to bring a change in the life of a suffering and deprived once to work for the removal of inequalities, tension, conflicts, corruption and other states of affair on this earth.

(2) Attitudes regarding independence

Generally all students have a strong desire and developing attitude of independence by asserting the release form the earlier accepted dependence on the parents and other adults. Many times they are seen to be on logger heads with their parents, teachers and elders simply for demonstrating the strong developed attitude of independence.

(3) Nature of Attitudes

- Attitudes are learned and acquired by experience and not inborn and inherent.
- Attitudes have motivational affective characteristics.
- Attitudes are developed right from childhood through the process of conditioning, imitation and instruction.

- Attitudes formed earlier could undergo changes in the light of new experiences; but this   process is very slow and that is why we say attitudes are more or less stable.
- We view the different components of our environment only through the lens of our present attitude towards them. We refuse to look at the good features present in objects towards which we have negative attitudes.
- Attitudes are numerous and varied as the stimuli to which they refer.
- An attitude usually is considered as consisting three basics components – thinking, feeling and reacting.

Formation of attitudes

(1) Integration of Experiences

The accumulation and integration of a number of related experiences about an object gives birth to an attitude towards that object. Attitude of a person towards other caste or religion has been formed in this way.

(2) Trauma or Dramatic experience:

Attitudes are formed with greater speed an intensity in account of sudden occurrence of unusual shocking experiences. A shop keeper whose shop has been burnt by the striking students develops intensively negative attitudes towards all students.

Factors influencing the development of attitudes
Factors pertaining to the individual self

(1) Physical Development

Physical health, vitality, and somatic structure play important role in one's social adjustment and through that exercise influence on the formation of attitudes in different directions.

143

(2) Emotional Development

Emotions play a dominant role in overt or covert behavior manifestations which are in turn related to attitudes.

(3) Social Development

Social interactions and group processes are the key to attitude formation at any stage of human development. Children having poor social adjustment are much more likely to have anti-social attitude are less subject to group influences, in the formation of other attitudes

(4) Moral Development

Each individual develops certain ideal values and a concept of self in which he has pride. This shapes the attitude of the individual regarding other behaviors and ethical standards to be followed in behavior.

Factors within the individual's environment

(1) Home and Family

The child by identifying himself with his parents and other members of the family, picks up their attitudes. The family initiates the formation of specific attitudes in children by defining the expected roles which the child must play in different situations. Healthy family environment and positive attitudes of the parents and family members bring desirable impact on children in picking up desirable attitudes.

(2) Social Environment

The contact with people in the neighborhood, school, community, mores and traditions of the community to which one belongs, cast strong influence in reshaping early attitudes and acquisitions of many more new attitudes.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   144

The religious groups, social clubs, or institutions were one learns or earns as a definite set of emotional and intellectual environment with the result the members of the group tend to pick up the characteristic attitudes of the group.

Mass media in the form of newspapers, radio, television, motion pictures and advertisements also play a key role shaping and modifying the attitudes of individuals.

Measuring Attitude

Two popular techniques

(1) Thurstone technique of scaled values
(2) Likert Method of summated ratings

Students' attitude

I am sure no educational institution in the world teaches bad things for the students. But still there are a few students who indulge themselves in very bad activities or behavior. So here whom are you going to blame? Students, teachers, or the educational institutions? I would say none of them is responsible for this. Because no one knows their (students) personal problems and situation. Here I would like to talk more about my personal experience with a student which I had in the past. A few years back I was working with a government institution and there is this boy who didn't turn up for the school for the past fifteen days, so I asked him where were you these days? He told his father expired I felt so sorry for that young kind and I asked hi m to take his seat and I continued with my class. Few hours later I saw a man who was standing in front of my class and I went ahead and asked , How may I help you ? He replied I am looking for a so and so student. Then its my duty to question him, may I know why you are looking for him? He said I am his father. I was terrified and I called him out; without asking anything he told me a reason that he is so scared of this school and study system that is why he bunked the school for past fifteen days. So I felt we need to come up with some innovative ideas to overcome these

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   145

kind of issues. So I was arranging one on one session for the students who were unable to concentrate on their studies due to various reasons. And also I did succeed in this attempt.

Conclusion

A few years back there was very good relationship between students and teachers. However in recent years I feel there is lot of gap in relationship between the students and teachers due to various reasons. I personally feel this has to be taken care of by the government or educational institutions by using some "innovative" ideas. We shouldn't stop with coming up with ideas, we should also implement those in existing practices of the current education system to make these better insitutions.

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Language in India www.languageinindia.com
13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   146

Information Processing Approach to Teaching-Learning Process

S. Prasannakumar
Dr. B. Saminathan

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Abstract

Cognitive theory emphasize that human mind is an active and individual processor of information. Knowledge is acquired by constructing a representation of the outside world. One's feelings, self-concept beliefs and existing knowledge influence acquisition of new knowledge. The realities and truths of external world also direct knowledge construction. Mental representations such as prepositional networks, concepts, cause and effect relations production rules reconstruct outside reality. Information processing theory holds this view of knowledge. It assumes that knowledge in encoded in long term memory in complex inter relationships of declarative knowledge, and procedural knowledge. As meta-cognitive knowledge and skills improve, learners develop the capacity for self-regulation.

General Principles

The first is the **assumption of a limited capacity** of the mental system. This means that the amount of information that can be processed by the system is constrained in some very important ways. Bottlenecks, or restrictions in the flow and processing of information, occur at very specific points.

A second principle is that a control mechanism is required to oversee the encoding, transformation, processing, storage, retrieval and utilization of information. That is, not all of the processing capacity of the system is available; an executive function that oversees this process will use up some of this capability. When one is learning a new task or is confronted with a new environment, the executive function requires more processing power than when one is doing a routine task or is in a familiar environment.

A third principle is that there is a two-way flow of information as we try to make sense of the world around us. We constantly use information that we gather through the senses (often referred to as bottom-up processing) and information we have stored in memory (often called top-down processing) in a dynamic process as we construct meaning about our environment and our relations to it. A similar distinction can be made between using information we derive from the senses and that generated by our imaginations.

A fourth principle generally accepted by cognitive psychologists is that the human organism has been **genetically prepared to process and organize information in specific ways**. For example, a human infant is more likely to look at a human face than any other stimulus. Research has discovered additional biological predispositions to process information. For example, language development is similar in all human infants regardless of language spoken by adults or the area in which they live

Stage Model of Information Processing

One of the major issues in cognitive psychology is the study of memory. The dominant view is labeled the "stage theory" and is based on the work of Atkinson and Shiffrin (1968).

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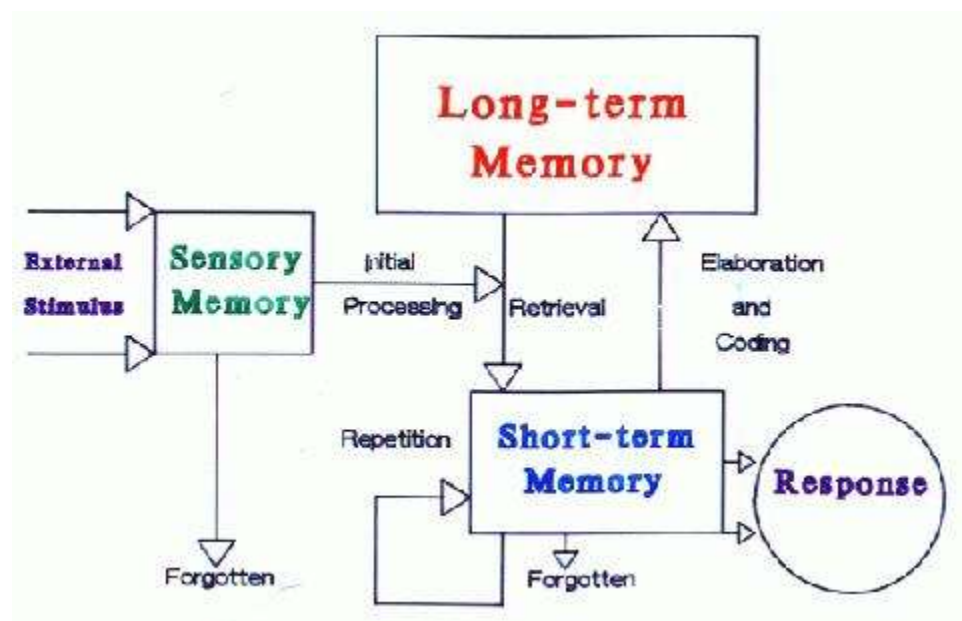Editors: P. Udayakumar, M.Sc., M.Phil., M.Ed., M.A., Ph.D. Candidate,
Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   148

This model proposes that information is processed and stored in 3 stages.

Sensory Memory (STSS). Sensory memory is affiliated with the transduction of energy (change from one energy form to another). The environment makes available a variety of sources of information (light, sound, smell, heat, cold, etc.), but the brain only understands electrical energy. The body has special sensory receptor cells that transduce (change from one form of energy to another) this external energy to something the brain can understand. In the process of transduction, a memory is created. This memory is very short (less than 1/2 second for vision; about 3 seconds for hearing).It is absolutely critical that the learner attend to the information at this initial stage in order to transfer it to the next one.

Short-term Memory (STM): Short-term memory is also called working memory and relates to what we are thinking about at any given moment in time. In Freudian terms, this is conscious memory. It is created by our paying attention to an external stimulus, an internal thought, or both. It will initially last somewhere around 15 to 20 seconds unless it is repeated (called maintenance rehearsal) at which point it may be available for up to 20 minutes. The hypothalamus is a brain structure thought to be involved in this shallow processing of information. The frontal lobes of the cerebral cortex are the structure associated with working memory. For example, you are processing the words you read on the screen in your frontal lobes. However, if I ask, "What is your telephone number?" your brain immediately calls that from long-term memory and replaces what was previously there.

Another major limit on information processing in STM is in terms of the number of units that can be processed an any one time. Miller (1956) gave the number as 7 ± 2, but more recent research suggests the number may be more like 5 ± 2 for most things we are trying to remember. Because of the variability in how much individuals can work with (for some it may be three, for others seven) it is necessary to **point out important information**. If some students can only process three units of information at a time, let us make certain it is the most important three.

Major Concepts for Retaining Information

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   149

There are two major concepts for retaining information in STM: organization and repetition. There are four major types of organization that are most often used in instructional design:

- Component (part/whole)--classification by category or concept (e.g., the components of the teaching/learning model);
- Sequential -- chronological; cause/effect; building to climax (e.g., baking a cake, reporting on a research study);
- Relevance -- central unifying idea or criteria (e.g., most important principles of learning for boys and girls, appropriate management strategies for middle school and high school students);
- Transitional (connective) -- relational words or phrases used to indicate qualitative change over time (e.g., stages in Piaget's theory of cognitive development or Erikson's stages of socio-emotional development)

Concept of Chunking

A related issue to organization is the concept of chunking or grouping pieces of data into units. For example, the letters "b d e" constitute three units of information while the word "bed" represents one unit even though it is composed of the same number of letters. Chunking is a major technique for getting and keeping information in short-term memory; it is also a type of elaboration that will help get information into long-term memory.

Repetition or rote rehearsal is a technique we all use to try to "learn" something. However, in order to be effective this must be done after forgetting begins. Researchers advise that the learner should not repeat immediately the content (or skill), but wait a few minutes and then repeat

Long-term Memory (LTM). Long-term memory is also called preconscious and unconscious memory in Freudian terms. Preconscious means that the information is relatively easily recalled (although it may take several minutes or even hours) while unconscious refers to data that is not available during normal consciousness. It is preconscious memory that is the focus of cognitive psychology as it relates to long-term memory. The levels-of-processing theory, however, has provided some research that attests to the fact that we "know" more than we can easily recall.

The two processes most likely to move information into long-term memory are elaboration and distributed practice (referred to as periodic review in the direct instruction model).

Examples of Elaboration

There are several examples of elaboration that are commonly used in the teaching/learning process:

- imaging -- creating a mental picture;
- method of loci (locations)--ideas or things to be remembered are connected to objects located in a familiar location;
- Peg word method (number, rhyming schemes)--ideas or things to be remembered are connected to specific words (e.g., one-bun, two-shoe, three-tree, etc.)
- Rhyming (songs, phrases)--information to be remembered is arranged in a rhyme (e.g., 30 days hath September, April, June, and November, etc.)
- Initial letter--the first letter of each word in a list is used to make a sentence (the sillier, the better).

Organization (Types) of Knowledge

As information is stored in long-term memory, it is organized using one or more structures: declarative, procedural, and/or imagery.

Declarative Memory (generally refers to information we can talk about)

- Semantic Memory-- facts and generalized information (concepts, principles, rules; problem-solving strategies; learning strategies)
  - Schema / Schemata -- networks of connected ideas or relationships; data structures or procedures for organizing the parts of a specific experience into a meaningful system (like a standard or stereotype)
  - Proposition -- interconnected set of concepts and relationships; if/then statements (smallest unit of information that can be judged true or false)
  - Script -- "declarative knowledge structure that captures general information about a routine series of events or a recurrent type of social event, such as eating in a restaurant or visiting the doctor" (Stillings et al., 1987)
  - Frame -- complex organization including concepts and visualizations that provide a reference within which stimuli and actions are judged (also called "Frame of Reference")
  - Scheme -- an organization of concepts, principles, rules, etc. that define a perspective and presents specific action patterns to follow

- o [Program]() -- set of rules that define what to do in a particular situation
- o [Paradigm]() -- the basic way of perceiving, thinking, valuing, and doing associated with a particular vision of reality (Harman, 1970)

- [Model]() -- a set of propositions or equations describing in simplified form some aspects of our experience. Every model is based upon a theory or paradigm, but the theory or paradigm may not be stated in concise form. Episodic Memory-- personal experience (information in stories and analogies)

Procedural Memory-- how to (driving a car, riding a bike)

Imagery – pictures

Metacognition: Knowledge and Control of Cognitive Processes

In information processing memory stores (sensory memory, working memory, and long term memory) retain information, whereas cognitive processes (attention, perception, rehearsal, encoding, and retrieval) move information from one store to the next. However, cognitive processes must be integrated strategically to derive meaning out of raw information. Metacognition which consists of knowledge about and control of cognitive processes serves this purpose.

Metacognition includes (a) people's knowledge or awareness of their cognitive processes, and (b) the ability to use self-regulatory mechanisms to control these processes. Metacognition is learner's awareness of his own cognitive machinery and how the machinery and how the machinery works metacognition literally mean cognition about cognition or knowledge about knowing and learning. This metacognitive knowledge is used to monitor and regulate cognitive process such as reasoning comprehension, problem solving, Learning, and so on.

Meta Cognitive Knowledge and Regulation

Metacognition involves three kinds of knowledge: (a) declarative knowledge about yourself as a learner, the factors that influence your learning and memory, and the skills, strategies and resources needed to perform a task-knowing what to do;(b) procedural knowledge

or knowing how to use the strategies; and (c) conditional knowledge to ensure the completion of the task-knowing when and why to apply the procedures and strategies(Bruning, schraw,&Roanning,1999).Metaognition is the strategic application of this declarative, procedural and conditional knowledge to accomplish goals and solve problems(Schunk,2000).

Metacognitive knowledge is used to regulate thinking and learning (Barown; Nelson, 1996). There are three essential skills that allow us to do this: planning, monitoring and evaluating.(i)Planning involves deciding how much time to give to a task, which strategies to use, how to start, what to skim and what to give intense attention to, and so on.(ii) Monitoring entails asking, "how I am doing? Is this making sense? Am I trying to go too fast? Have I studied enough?"(iii) Evaluating involves making judgments about the processes and outcomes of thinking and learning. For instance, asking 'should I change strategies, Get help? Give up for now? Is this assignment (painting, model, poem, plan, etc.)Finished?

Making Information More Meaningful

Meaningfulness describes the number of connections, or associations, between one idea and other ideas in long-term memory (Gane,etal., 1993)

Johnson (1975) in a review of research on meaningful learning concludes that 'Learning may be said to b meaningful to the extent that the new learning task can be related to the existing cognitive structure of the learner that is, the residual of earlier learning's'(p.427). The belief is that memories are more likely to be retained in LTM if they are related to what is already remembered. New idea associated with the old one is likely to be remembered more. The degree of meaningfulness depends on the 'associational ackground of the learner' (Johnson, 1975). It is connecting 'what is to be learned' with 'what the learner already knows'.

Information that is meaningful is interconnected with is meaningful is interconnected with other information in memory, and an important goal in teaching is to help learners to increase the number f connections between individual items of information. A teacher can help learners in making information more meaningful by putting them in the most active role

153

possible, encouraging visual imagery, organizing content in various ways, and encouraging learners to elaborate on their own understanding

Although all cognitive views of learning focus on learners being active, constructivism places more emphasis on learners constructing their own understanding than do other cognitive theories. Constructivists disagree on the nature of knowledge, but they generally agree that new learning exists in the context of prior understanding; Learning is enhanced by social activity; and authentic tasks promote learning. Many constructivists suggest that teachers should create a 'learning community' Where teachers and students work together to solve problems.

Conclusion

Cognitive theories emphasize that human mind is an active and individual processor of information. Active thinking is influenced by one's feelings, self concept or identity, beliefs, and existing knowledge and in turn is bound to influence the structure of new thoughts. Knowledge is acquired by constructing a representation of the outside world. The realities and truths of the external world direct knowledge construction. Individuals reconstruct outside reality by building accurate mental representations such as prepositional networks, concepts, cause and effect relationships, and condition action production rules that reflect "the way things really are". Information processing holds this view of knowledge

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References

Atkinson, R., & Shiffrin, R. (1968). Human memory: A proposed system and its control processes. In K Spence & J Spence (Eds.). The psychology of learning and motivation: Advances in research and theory (Vol. 2). New York: Academic Press.

Bransford, J. (1979). Human cognition: Learning, understanding, and remembering. Belmont, CA: Wadsworth.

Craik, F., & Lockhart, R. (1972). Levels of processing: A framework for memory research. Journal of Verbal Thinking and Verbal Behavior, 11, 671-684.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   154

Goleman, D. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement. New York: Bantam Books.

Harman, W. (1970). An incomplete guide to the future. New York: W. W. Norton.

Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. Psychological Review, 63, 81-97. [Available online from Classics in the History of Psychology: http://www.well.com/user/smalin/miller.html]

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   155

Progress of Women's Education in the Union Territory of Puducherry

T. Radha, Ph.D.

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Abstract

The present study examined about women's education in the Union Territory of Puducherry since independence. The paper is designed to obtain the information about the prograss of literacy in the Union Territory of Puducherry since independence. The study revealed that there is a marked increase in the female literacy at present. Only rich and upper girls were educated in the past where as opportunities are open for all to participate in higher education now. The observation seems to be valuable and appropriate as far as women's education is concerned.

INTRODUCTION

Educating women benefits the whole of society. When women are educated their dependence automatically disappears or at least decreases. Education helps women to resist exploitation, besides of course empowering them to be self-reliant. Where women are educated they can become potential sources for harnessing a community's resources for general well-being. Education which increases women's awareness leads to their overall development in particular and social in general

Women's education can serve as a powerful instrument for individuals to achieve upward social and economic mobility and achieve power and status in society. It is a source of mobility, equality and empowerment both at the individual and at the social level

A. About the Union Territory of Pondicherry

The Union Territory of Pondicherry has a chequered history. The original name of Pondicherry was Vedapuram or Vedapuri which suggests that Pondicherry was traditionally a seat of learning and vedic culture. The name Pondicherry is also connected with 'PODUCA'. At the time when the French came, Pondicherry came to be known as PUDUCHERY which means new village. Pondicherry existed 12,000 years ago. This long period may be divided into four sub periods, namely the Ancient period, the Tamil period, the period of Alien-Rulers and the period of the struggle for freedom.

The ancient people of Pondicherry had links with the Indus valley civilization. The Territory was under the Andhra dynasty, which was replaced, by the Pallava dynasty in the fifth century. The first quarter of the forth century witnessed the rule of kings. The Pallavas, the Cholas and the Pandyas ruled this Territory. Pondicherry was under the Vijayanagar Empire during the 14th and 15th centuries. The Muslim rulers followed it. In course of time the Portuguese came to Pondicherry, and then came the Danes who lived in Pondicherry for a short time. The French influence began to spread after the Danes left Pondicherry. Francois Martin was sent to Pondicherry and he transformed what was considered to be a fishing village into a flourishing textile port. In 1693, Pondicherry passed on to the hands of the Dutch who purchased it from the ruler of Gingee. Four years later, Pondicherry was again transferred to the French. The French trade was transferred from Surat to Pondicherry.

In 1742, Joseph Francois Dupleix became the Governor of French India. After the rule of Dupleix, the supremacy of France began to decline and the British brought Pondicherry under their rule. Control over Pondicherry swung between the French and the English subsequently. But in 1861, the French came back and permanently settled in Pondicherry till the merger. The French ruled Pondicherry for a period of 138 years.

The freedom struggle in India had its impact on Pondicherry also. Pondicherry provided shelter to the nationalists like Sri Aurobindo Ghose, Poet Subramaniya Bharathi and Sri V.V.S.

157

Iyer. After India became Independent the demand for the Independence of Pondicherry grew in strength. A series of events ultimately led to the freedom of Pondicherry from the French rule, on 1st November, 1954 when Pondicherry merged with the Indian Union.   The French possessions in India were de facto transferred to the Indian Union and Pondicherry became a Union Territory and foreign rule came to an end. But only in 1963 Pondicherry became officially an integral part of India after the French Parliament in Paris ratified the treaty with India.

A Union Territory (UT) has its own government but falls directly under the Central Government in New Delhi. Though a UT also has an elected Chief Minister and cabinet members, laws and legislative regulations made in these areas have to get sanction or need to be ratified by the Central Government (Centre). The Centre is represented by the Lt. Governor, who resides at the Raj Nivas, the former palace of the French Governor. The Centre is also responsible for the financial well-being of these Union Territories, whereas the states get more or less a fixed amount and need to balance their budget by their own revenue and income. Hence taxes in the U. Ts are usually lower than the states. For instance: 3% sales tax in Pondicherry versus 10% and above in neighbouring Tamil Nadu.

Pondicherry still has a large number of Tamil residents with French passports, whose ancestors were in French Governmental service and who chose to remain French at the time of Independence. Apart from the monuments pertaining to the French Period, there is the French Consulate in Pondicherry and several cultural organisations, and even the Foyer du Soldat for war veterans of the French Army. Of the cultural organisations the French Institute, the Alliance Francais and the Ecole Francais d'Extrème Orient are noteworthy.Education is considered to be a potent input in Socio-cultural and economic development of the country. Experiences of the developed countries have shown a strong correlation between educational investment and economic development. This called for more expenditure on the development of education. Therefore, educational planning and growth of educational facilities have become the order of the day and the Union Territory of Pondicherry is no exception to this.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   158

Education During Pre-merger Period

The Union Territory of Pondicherry is created with a glorious history of education. It has been a great centre of learning since eighth century AD. The copper plate inscriptions at Bahoor speak of 'Vidyastana' which means a seat of learning. A Sanskrit college was functioning there even from the beginning of the eighth century. The Sanskrit learning continued during the Chola period as well. A Sanskrit college was functioning at Thirubuvani. Some Tamil Colleges also must have existed during this period. The information regarding the system of education prevailing in the Territory till the arrival of the French in 17 century is copious. There were Thinnai Palligal– small schools run in the house premises of teachers, hailing from high caste Hindus and Vathiyars and Pandits who were well versed in arithmetic. Religion and local languages were also imparted to the students.

The seeds of modern education in the territory were sown only during the French rule in the 18th century. In 1703, the Jesuits established a few schools in the territory for the children of the settlers. The other Europeans and a few Indians also revived education in these schools. The Jesuits also opened a college in Pondicherry which was closed during the French Revolution of 1879. Apart from these colleges there were two other educational institutions. In 1738 the Ursulines came to Pondicherry to run schools for girls. This came as a great boon to the spread of girls' education in the state.

Nineteenth Century added further momentum to the spread of education in the Union Territory. Compete, the First Governor General, appointed after the final restoration, evinced keen interest in promoting education among the youth. On his request, the missionaries reopened and closed colleges. Annual grants in cash were given to these institutions .The missionaries also opened three primary schools, one in Pondicherry called Ecole de la rue Royale in 1820, another in Karaikal for teaching Tamil and French and a similar one at Mahe. The region of

Desbassyns de Richemont saw the growth of primary, secondary, collegiate and professional education. He promoted girls' education by establishing schools for girls, invited the sisters of the congregation of St. Joseph de Cluny from Bourbon to Pondicherry. The school was called Pensionnat.

The Royal ordinance of 30th September 1843 , was another land mark in the history of education, because it sought to modernise education at par with international standards. It sought to train the youth for jobs in all colonies. Even though the system of education was biased in favour of French language, local languages were also given due importance. The period between 1843 and 1877 was considered to be the golden age for education; it was during this period that several institutions of importance were established, Maison De' education in Karaikal, the Petit Seminare College in Pondicherry , to quote a few. A free girls' schools for all children in Yanam and Mahe and the Calve College for Hindus were also opened. During 1838 to 1863, courses in Law, medicine, etc., were introduced. The examination system known as Brevet de Capacite' de I enseignement Secondaire was introduced in 1863.

In 1879, there were 38 government schools and 227 private schools. Government spent 91,774 francs on primary and 53, 000 francs on secondary education. Many Franch trained inspectors were appointed to control the primary as well as secondary education..

Land Marks in the French Rule

Following are some of the landmarks in education under the French Rule.

1827 **: Free schools – one at Pondicherry and one at Karaikal – opened**

      Public library -   opened

1837: Law classes began

1842: Registers of birth, marriages and deaths opened at Pondicherry,

Chandranagore, Karaikal, Mahe and Yanam

1847 : Royal College, later known as the colonial college opened

1867 : The Express of France named a school for Hindu girls as St. Eugiene institution

1873 : A free school for girls founded at Mahe by a Zamindar

1877 : A school named calve college opened

1890 : Public library opened at Karaikal

1891 : First official census taken

1946: Political reforms. The Governor's post abolished. Post of The
(Commissioner of the ninth French) Republics created. The General
Assembly turned into the Representative Assembly.

* Successive Governors improved infrastructure, industry, law and education over the
next 138 years.

1947: The English left India for good, but it lasted till 1954 when the French
handed Pondicherry over to an independent India.

The merger period witnessed phenomenal expansion in the educational facilities. The number of pre-primary educational institutions has increased manifold. Primary education has attained a place of pride, which has enabled the union territory to achieve universalisation of primary education to the children. The Territory has also made considerable progress in the sphere of secondary and collegiate education (Deepthi, 1982).

While reviewing the progress of education in the Union Territory in the post-merger period, it should be mentioned that the Union Territory has attained significant progress in augmenting educational facilities. Girls' education has been spread to a large extent. Students belonging to weaker sections have come to receive more facilities from the educational system that has been developed. The expenditure incurred by the government on education has also been increasing year after year (Ramasamy, 1987).

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   161

However, there is a wide spread suggestion that many of the institutions lack the basic infrastructural facilities though institutions have been growing. The educational system is also characterised by drop outs and stagnation at different levels of education. Thirdly, the main emphasis of educational system has been on general education which promotes literacy rather than productivity of the individuals. The system of education as in other parts of the country is said to be irrelevant to the needs of the society. It is hoped that with the advent of new education policy, these defects of the existing system may be removed.

Progress of Literacy in the Union Territory

Table 01 exhibits the progress of literacy in the Union Territory, noticed in the census year books .

TABLE 01. PROGRESS OF LITERACY IN THE UNION TERRITORY

S.No	Year	Percent of literate to total population		Total
		Female	Male	
1	1961	24.64	50.39	37.43
2	1971	34.62	57.29	46.02
3	1981	45.71	65.84	55.85
4	1991	65.63	83.68	74.74
5	2001	74.13	88.89	81.49
6	2011	81.22	92.12	86.67

Source: Directorate of Education, Pondicherry

Register General and Census Commissioner, India

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   162

As seen in the figure, the growth of literacy from the census 1961 to the census 2011, appears to be steadily growing in general and the female literacy in particular from 24.64 percent in 1961 to 81.22 percent in 2011, which indicates the fast growth in female literacy. No doubt, this fast growth has helped them to come out from their shells in search for better status in the society.

The female literacy in the 2011 census was 81.22%. The male literacy was found to be 92.12 % - a higher percentage. This may be due to the availability of educational institutions.

Analysis

♦ **Progress of Literacy in the Union Territory Since Independence**

The progress of literacy in the Union Territory Since Independence, between 1961 (First census) and 2011(latest) for males and females, is compared in the following table.

S.No	Content	Literacy Rate	
		1961	**2011**
1	Male	50.39	92.12
2	Female	24.64	81.22

The table shows a steady progress of literacy in the Union Territory for males from 50.39 and for females it was 24.64 in 1961 and 81.22 % in 2011. A marked increase in female literacy is observed.

■ **Comparison of female literacy in the union territory with the national level is given in the table below.**

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   163

| S.No | Content | Literacy Rate Female | |
		1961	2011
1	Union Territory of Pondicherry	24.64	81.22
2	Nation	15.35	74.04

The female literacy in the Union Territory was 24.64% during the census year 1961 and it rose upto 81.22 % during the census year 2011. At the National level, for the same period, it was 15.35% in 1961 and   74. 04 % in 2011.

Starting from the beginning (1961) the women literacy was found to be high (24.64%) in the Union Territory compared to the national level which was only 15.35% during the census year 1961. The same trend was observed in 2011 census too, with a remarkable rise in female literacy in the union territory than the national level which was 74.04v%.

Conclusion

The development of education among women is the main instrument through which we can narrow down the prevailing social inequality and accelerate the process of economic and political changes in the status of women. The Union Territory of Pondicherry, known for its French education system, embarked upon massive expansion of educational facilities based on the Indian pattern since 1954. Today the Territory is one among the educationally progressive States/Union Territories in India.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   164

References

1. Sushma S. (1992). Development of Education and Employment of women in India, Mittal Publication, New Delhi, P.13.

2. Ashok Kumar, (2001). Indian Women towards 21st century, Criterian Publications, New Delhi, P.36.

3. Kalbagh, C. (1997). Women and Development, Discover Publishing House, New Delhi, P.26.

4. Ramaswamy, A. (1987). History of Pondicherry, Sterling Publishers Private Ltd., P. 6.

5. Raja, P. (1987). A Concise History of Pondicherry, Pondicherry All India Books, P.5.

6. www.pondicherryonencyclopedia.com, 2010.

7. Pandya. P., 1999. Higher Education for Girls – Myths and Realities, University News, Vol.37, No.34, P.6.

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Key to Technology Enabled Learning

A. Renugadevi

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ABSTRACT

A Brief Perspective

While there are many government schools especially in Tamil Nadu where technology-enabled learning has been commissioned, the bigger challenge in the new year and the years to follow would be of propagating the same to rest of the government schools in the entire country, This is to ensure that they are on par with private schools, which are relentlessly spending crores of rupees on the new education model.

EdServ, another popular e-learning company in the country is of the opinion that it would be impossible to retain school children and increase their admissions in higher education unless schools are supported with quality content and teacher empowerment using technology. NIIT Ltd. too has its version of opinion on how technology-enabled learning has enabled students to learn the theories and practical better. And it attributed this to the ready availability of multimedia computers and internet.

Mr. Asheesh Raina of Gartner has two cents on how technology is changing the education today. He said, "*today's kids are 'digital native'-born in the digital world as opposed to a person in his 30s being a 'digital immigrant' i.e. those who entered the digital era in the last few years. Students are using sophisticated gadgets at a young age. This puts pressure on the education system to make content available on gadgets rather than on black boards. Also, with the shortage of skilled teachers and low salary levels, technology is the alternative*".

Key Players in the field

Altogether there are about 200 players in this space in India and prominent ones among them being Everonn, EdServe, Educomp, NIIT. The areas that these companies focus on include online tuition, online test preparation, soft skills training etc. This literally depicts that technology-enabled learning has a huge scope and potential in the country owing to its huge population.

The Government of India has also been contributing in this field. For instance, UGC-INFONET set up by the University Grants Commission (UGC) allows for online access of scholarly literature in all areas of learning to various universities in the country. Mention can also be made of National Programme on Technology Enhanced Learning (NPTEL) being offered by IITs and IISc in collaboration with the Ministry of Human Resource Development that uses multimedia and web technology to enhance learning of basic science and engineering concepts. Like these, there are other initiatives as well.

Key Takeaways

Talking of the main advantages of this new education model, teachers would find it easier to disseminate their knowledge. In the blackboard model of teaching what happened was they have a hard time explaining concepts that encompass complicated diagrams. An example of that is the DNA diagram. A teacher explains the diagram on the blackboard while students are in the state of perplexity as they have to take notes alongside visualizing/understanding the same. But in the technology-enabled learning, students are taught the same concept with interactive multimedia content that makes grasping the concept a breeze for the students. Perhaps, they get the real feel of the diagram due to the powerful visuals used in the video/slides.

Justindianschools.com has an interesting report on technology-enabled learning in Indian schools. It said that this model of learning can remove social and economic boundaries by ways of making classroom teaching highly interactive.

WHAT IS TECHNOLOGY ENABLED LEARNING (TeL)
NEW DIRECTION IN EDUCATION

The Technology Enabled Learning (TeL) is a platform for providing Internet enabled Education. Its significance has increased as the penetration of Internet clearly indicates the worldwide acceptance of it as a communication tool. Technology Enabled Learning (TeL) uses Internet as a media for leveraging the pitfalls of our traditional education system by providing an environment, which is more learners centric rather than being more instructors centric, powered by Internet Technology. The Technology Enabled Learning (TeL) has laid a new chapter in education. Through the Technology Enabled Learning (TeL), learners can now undergo training sitting at their home or any other place with Internet accessibility and continue their education.

Education shapes the destiny of a nation. It is the principle instrument of developing human capabilities and transforming the economy. The traditional structure of the classroom has existed for thousands of years and has evolved by passing through various phases. The first phase was the Gurukul where gurus imparted knowledge to shishyas. Then came the second phase where the teacher taught using blackboard and chalk. In the third phase virtual aids like OHP and multimedia took over the traditional system of imparting education.

Now comes the Education Revolution! Barriers of time and space have been eroded…. **Education becomes ONLINE**. Technology Enabled Learning (TeL) is Internet enabled technology driven education that allows you to **study Anytime…. Anywhere**…. as per your convenience.

In the context of rapid technological advancement and changing global market, the impact is felt on every field including education arena. Technology Enabled Learning (TeL) is one of the ways of imparting effective education to the aspiring people, residing anywhere in the world, to pursue and advance their learning process via Internet, without messing up their professional responsibilities and duties with education by presenting a variety of solutions and subjects beyond the scope of traditional education. Online learning helps to increase the educational experiences irrespective of age and geographical diversity.

Technology Enabled Learning (TeL) is an umbrella term that describes learning done on a computer, usually connected to a network, giving us the opportunity to learn almost anytime, anywhere. Technology Enabled Learning (TeL) is not unlike any other form of education - and it is widely accepted that Technology Enabled Learning (TeL) can be as rich and as valuable as the classroom experience or even more so. With its unique features Technology Enabled Learning (TeL) is an experience that leads to comprehension and mastery of new skills and knowledge, just like its traditional counterpart.

Instructional Design for Technology Enabled Learning (TeL) has been perfected and refined over many years using established teaching principles, with many benefits to students. As a result colleges, universities, businesses, and organizations worldwide now offer their students fully accredited online degree, vocational, and continuing education programs in abundance.

Some other terms frequently interchanged with Technology Enabled Learning (TeL) include:
» Online learning
» Online education
» eLearning
» Web-based training
» Computer-based training (generally thought of as learning from a CD-ROM)

Technology Enabled Learning (TeL) is a broad term used to describe learning done at a computer.

WHY TECHNOLOGY ENABLED LEARNING (TeL)

We have to keep on learning so that we can grow personally, professionally, socially and economically. For thousands of years, the paradigm of learning was the classroom-training model. In a time when formal learning was scarce, resources were concentrated around and centered on the availability of the educator, rather than the learner. Today Technology Enabled Learning(TeL) is the self- paced learning methods combine advanced technology and multimedia in a format that engages students so they learn
faster, participate more actively and consequently, retain information longer.

FEATURES OF TECHNOLOGY ENABLED LEARNING (TeL)

"Good teaching is good teaching, no matter how it's done." The old adage still rings true, and Technology Enabled Learning (TeL) brings with it new dimensions in education.

Some of the unique features of Technology Enabled Learning (TeL) are listed below.

- Learning is self-paced and gives students a chance to speed up or slow down as necessary
- Learning is self-directed, allowing students to choose content and tools appropriate to their differing interests, needs, and skill levels
- Accommodates multiple learning styles using a variety of delivery methods geared to different learners; more effective for certain learners
- Designed around the learner
- Geographical barriers are eliminated, opening up broader education options
- 24/7 accessibility makes scheduling easy and allows a greater number of people to attend classes
- On-demand access means learning can happen precisely when needed
- Travel time and associated costs (parking, fuel, vehicle maintenance) are reduced or eliminated
- Overall student costs are frequently less (tuition, residence, food, child care)
- Potentially lower costs for companies needing training, and for the providers
- Fosters greater student interaction and collaboration
- Fosters greater student/instructor contact
- Enhances computer and Internet skills
- Draws upon thousands of years of established pedagogical principles
- Has the attention of every major university in the world, most with their own online degrees, certificates, and individual courses

BENEFITS OF TECHNOLOGY ENABLED LEARNING (TeL)

Enables education anywhere, anytime and to anyone
The world-wide-web empowers the University to deliver training & critical information to its wide spread student base no matter where & what time zone the users are in. They can just access it whenever they feel like, from home or from office.

Always on
Class starts when you want. Facilitates self-paced learning- It gives the students the flexibility to go through the programme content at the time that is most convenient to him and thereby achieves an appropriate balance of work, family, community and educational commitments.

Better Access
Determining the best time to schedule a class and lure the student into the "brick and mortar" classroom is one of the major drawbacks of traditional training programs. Technology Enabled Learning(TeL) provides access to training for students when and where they need it.

Cost Savings
A much-touted benefit of Technology Enabled Learning(TeL) is cost savings. Lot of amount can be saved in travel and downtime alone by using Technology Enabled Learning(TeL). Training materials can be updated for a fraction of the cost of revising materials distributed by other means. Payback can be seen clearly over the near and long term.

Learner Focused
Technology can personalize content and anticipate learner's future information learning needs. It also can match content with each individual's learning style, experience and skills.

Measurable
Powerful Learning Management System (LMS) features make the implementation, hosting, tracking, testing, auditing and administration of online courses a flawless process. Technology Enabled Learning(TeL) provides secure and reliable systems for recording and capturing what an individual knows and is able to do.

Better Learning Outcomes
Research from around the world has proven that the Technology Enabled Learning(TeL) results

better outcomes in terms of learning and knowledge retention when compared with traditional methods of teaching.

Faster Response Time

Time sensitive training can be delivered faster than through traditional classroom methods. By using communication technology to deliver training to multiple sites at the same time, Technology Enabled Learning(TeL) becomes a competitive advantage.

Better Use of "Experts"

An expert presenter or trainer can be used more cost effectively with Technology Enabled Learning(TeL) than through traditional classrooms. Programs that require the presence of an expert can send the expert's message to multiple sites simultaneously - saving time and money. And the message is consistent for every delivery of the course.

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References

Journal of Advanced Learning (online), 2011

Survey made on University of Nagaland

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   171

Curriculum Adaptation for Children with Hearing Impairment in Inclusive Education

R. Shanthi

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Abstract

"Inclusion", "Full inclusion and inclusive education" are terms which recently have been narrowly defined by some (primarily educators of students with severe disabilities) to espouse the philosophy that **All** students with disabilities, regardless of the nature or the severity of their disability, receive their **Total Education** within the regular education environment. This philosophy is based on the relatively recent placement of a limited number of students with severe disabilities in regular classroom. It must be based on curriculum areas that require unique strategies or adaptations for students with hearing impairments include concept development academic functioning, communication skills, sensory, motor skills, social / emotional skills, daily living skills, strategies or adaptations career / vocational skills and utilization of residual hearing. Therefore, to achieve quality education for students with hearing impairment, services must be provided using a team approach, including members with disability specific expertise in educating students with hearing impairment.

Introduction

Curriculum is the system of content, it should provide total experience in life through that the student get opportunity and exposure, for their sustainability, accessibility which leads them towards an independent life.

Inclusive Education is the ideal one for the children with hearing impairment to get the education, because the Incidental rate is 3% among 1000 children. In general the educational programmes are covered with curriculum. Curriculum is the sum of all activities, experience and learning opportunities for which an institution or a teacher takes responsibility – either deliberately or by default.

To provides opportunity and experience to enhance their total development. the main folder for curriculum is to

- impart knowledge
- Develop skills
- Develop proper interest attitudes and values.

Unfortunately the children with hearing impairment are often marginalized within or even sometimes included from the school system. Whenever children are enrolled in the general school, the crucial issue in the development practices is to meet the academic functioning, communication skills, sensory motor skills, social / emotional skills, daily living skills, career / vocational skills and utilization of residual hearing and concept development. Secondly, the effective teaching of the facilitator. Thirdly, the parents' participation.

However, the second and third part will be satisfied through proper training and motivation. But curriculum need to be adopted for the success of inclusive education.

By adapting curriculum the children with hearing impairment will feel as a integral part of school, not apart from school and learn the concept with perception.

Effect of Hearing impairment

The effect of hearing impairment can vary according to the on set of hearing loss and the severity of hearing loss. Due to effect of hearing loss the child face the following obstacles.

1) Never speak like normal, until / unless special training is undertaken early in life.
2) Knowledge of speech and control of speech organs are not acquired.
3) Difficulties in speech production
4) Deficient knowledge in phonology, morphology, syntax and semantics and their usage part also.
5) Establishment of adequate speech habits will be hindered.

6) Loses their listening experience that will reflect in the process of learning to talk.

7) Distinguish the elements of speech is impossible.

8) Hearing impaired child will not be able to pronounce sound if he does not hear, unless he has special training.

9) Articulatory defects – soda problem.

10) Initial mastery of phoneme will be prohibited.

11) Effectiveness of suprasegmental aspects (melody, quality, time and stress) will be affected.

12) Difficulties in suprasegmental aspect will hinder the effectiveness of oral communication.

13) Disturbs the ability to adjust the levels of one's voice to the situation.

14) Receive false impression of the loudness of his own voice.

15) People with sensorineural loss hears his own voice softly hence has a tendency to talk loudly, regardless of surroundings, whereas a person with conductive loss hears his own voice loudly through bone conduction hence he speaks softly. Quality of voice is abnormal.

16) Vowel sounds are heard clearly but voiceless consonants may be missed.

17) With the help of residual hearing the children with hearing impairment will be able to hear sound but not clearly. Without amplification, they are unable to hear any sounds.

Post-Lingual hearing loss

1. Deterioration of speech occurs after severe hearing impairment, it may be neither instantaneous nor complete.

2. Lost their control of loudness.

3. Irregularities of rhythm are noted.

Language problem without special intervention,

1. There is no receptive and expressive verbal language.

2. Expression through gestures only.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   174

3. Depending on the residual hearing, they may know nearly 15 to 250 words only.

4. They may get to know some basic nouns, adjectives and a few verbs through proper, systematic and appropriate teaching.

5. The majority of hearing impaired are delayed in language experience.

6. Exploitation of the residual hearing is a very important factor.

7. Errors and omissions in the use of verbs.

8. Incorrect use or omissions of functions words such as articles, preposition etc.

9. Errors or omissions in use of plurals and tense endings.

10. Great difficulty in learning the gender, number, person concord that exists in most of the Indian languages.

11. Errors / omissions in the use of case markers which appear at the end of the nouns and are not heard or seen that easily on the lips by the deaf children.

12. Use of stereotype sentences such as 'subject – verb object' patterns,

13. Sentences are telegraphic in quality and both the speech and the written work lack in abstract concepts.

14. Difficulties in spoken language.

15. Reading is the only way to overcome it. But, the child with hearing impaired is retarded in area of reading because of unawareness of the graphic representation of Alphabets.

16. Due to retardation in knowing, understanding and comprehension of each alphabets, they face more difficulties in reading and writing. Writing with mistake, abstract writing / independent writing.

17. Due to poor listening experience, they are unable to memorize the graphical representation of alphabets (Tamil / English).

    (i)   Writing with mistake.

    (ii)   Independent writing

    (iii)   Memory writing.

    (iv)   Abstract writing.

    (v)   Comprehensive writing.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   175

18. Good in copy writing.

Tips for the teachers to do adaptation in curriculum

Curricular adaptations are mostly suggested for hearing impaired children who need non-audio experience in adaptation of learning materials for the use of children with hearing disabilities.

The teacher of the hearing impaired had to make special and planned efforts to provide opportunities in following the criteria repeatedly,

1. Listening with understanding.
2. Interpreting the written symbol with picture (Stage by stage it has to be develop based standard).
3. Try to develop their reasoning capacity through experience.
4. To provide realistic experience for concept building.
5. Give opportunities for their expressive language (communicating by speaking or by writing).
6. Try to teach the concept in an enjoyable and interesting manner.
7. Need sustained efforts for a long period of time to get response, because the results will not be seen immediately.
8. Simply the actual lesson into small, small task and directed activity based.
9. Find out the meaning for the complex word in the particular lesson.
10. Try to avoid the complex sentence while speaking and writing.
11. Try to avoid the different meaning for same word.
12. Teach the task with appropriate aid.
13. To use visual aids as much as possible.
14. To avoid more speaking during taking class.
15. Speak clearly with correct pronunciation with appropriate sound level.
16. Don't insist in completing the task without comprehension.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   176

17. After finishing each task to evaluate the understanding performance of the child with hearing impairment.

18. Utilize the sign and written mode wherever it possible.

19. Try to develops their self realization based skills through intentional and unintentional learning experience.

20. Adaptation in terms of method of presentation, display, content etc may be necessary to enhance the learning experience of these children.

Conclusion

To achieve quality education for students with hearing impairment, services must be provided using a team approach, including members with disability – specific expertise in educating students with hearing impairment.

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References

1. Asmita.H, Rekha .M, Prabha. G, Varsha.G, (2006). Language and Communication. New Delhi: Kanishka Publishers.

2. Gathoo. V., (Ed.) (2006). Curricular strategies and Adaptations for Children with Hearing Impairment. New Delhi: Kanishka Publishers.

3. Narayanansamy. S., Kansara. J., Rangasayee. R., (2006). Family, Community and the Hearing child. New Delhi: Kanishka Publishers,.

4. Rangasayee. R., (2007). Fundamentals of Hearing, Hearing Impairment and Audiological Management. Jaipur : Advance Books.

5. Reddy. G. L (2004). Hearing Impairment: An Educational Consideration, New Delhi: Discovery Publishing House.

6. Relekar. S., (2006). Fundamentals of Speech and Speech Teaching. New Delhi: Kanishka Publishers,

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   177

7. Sharma. K, (2006). Aural Rehabilitation of Hearing Impaired Children.   New Delhi: Sarup And Sons

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   178

Technological Approaches of CAI in Teaching Chemistry for Higher Secondary Students

Dr. (Mrs.) S. P. Denisia
A. Suresh John Kennedy

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Abstract

In determining the effect of Computer Assisted Instruction (CAI) on students' performance, three groups of students had been taken for experimental studies. Each group consisting of 40 students in total 120 students were taken as samples for a period of six months for teaching chemistry in the schools of Tenkasi, Tirunelveli through Computer Assisted Instruction to Experimental group I & II and a Control group. The control group was taught with conventional teaching method and the other two groups with CAI software package with discussion and without discussion. As this was the first attempt in deploying CAI in teaching chemistry concepts in the schools, it was primarily employed as educational means of teaching with CAI. This paper highlights a personal experience and a case study of implementing Computer Assisted Instruction and the effect it has on students' performance in the course. Through hypotheses testing, it is clearly possible that employing Computer Assisted Instruction in educational settings proves to have significant effect on students' performance.

Keywords – Computer, Chemistry, Teaching

Introduction

Computer use by any teacher is a function of his or her computer experience and expertise, availability of hardware and software, and perceived need. An excellent chemistry course may be taught without the use of a computer. However, the careful incorporation of computers into a chemistry course can and does add an important level of enhancement.

179

Although not as conclusive as one might hope, studies do indicate that computer use in chemistry education can improve learning and positively influence students' attitudes and self-esteem.

The importance of using computers in a chemistry class may not be limited to the ability of Computer Assisted Instruction (CAI) to improve learning. Rather, computer use adds another dimension to the teacher's repertoire of strategies, which may improve overall learning. Another important reason to include student computer use in a chemistry course is that most (if not all) students, especially those planning a career in chemistry, will be required to be computer literate. As students interact with computers in a variety of ways within their chemistry courses, their degree of computer awareness and literacy will increase.

Review of Literature

The following studies found positive effects associated with computer use in science education applications:

Indian Studies

Nirma M. Joseph and Dr. P. Annaraja (2006) conducted a study on teacher trainee's attitude towards information and communication technology.

The major findings were there is no significant difference between male and female teacher trainee in their attitude towards ICT. There is no significant association between attitudes towards ICT.

Bobin Antony (2006) conducted a study on development of CAI package in IX standard computer science and its effectiveness.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   180

The major findings were the experimental groups obtained a higher mean then the control group. The sex wise comparison is insignificant. There is no significant association between the gain score and the hours of study of the control group students and there is no significant association between the gain score and the hours of study of the experimental group students.

Nirmala Sundaraj and Annaraja (2005) conducted a study on effectiveness of power point presentation in teaching zoology for higher secondary students.

The major findings were there was significant difference between the pre-test and the post-test scores of the students. There was significant difference pre-test and post-test scores of the students in attainment of knowledge, understanding and skill objectives. That is experimental group students are better than the control group students.

Subramanian (2006) conducted a study on effectiveness of CAI for teaching triple column cash book at higher secondary level.

The major findings were CAI package significantly improved the performance of students in learning accountancy of higher secondary school. Male students do not differ much from their female counter park in their academic achievements even after exposes to CAI.

Subasri (2006) conducted a study on accessibility of power point presentations among high school and higher secondary school teachers in classroom teaching.

The major findings there is high significant relationship between the fundamental knowledge of computer among the teachers power point accessibility in class room teaching. Urban teachers are found to utilize power point presentations more effectively in class room teaching when compared teachers. There is no significant difference between the high school and higher secondary school teachers in utilizing the power point presentation in class room teaching.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   181

Helen Joy and Shiju (2005) conducted a study on development of CAI teaching material in history at higher secondary level and its effectiveness.

The major findings were there is significance difference between control and experimental group students in there gain score. That is experimental group students are better then the control group students in the gain score. It is noticed that the experimental treatment is effect to the students. It is interesting that the performance of urban students is better than rural students assume importance. It is likely that the rural students are less exposed to computer at school and the home.
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Antony Gracious (2005) conducted a study on development of hypermedia learning package in science for IX standard students and its effectiveness.

The major findings were the experimental groups obtained a higher mean them the control group. The sex wise comparison is insignificant. There is no significant association between the gain score and the hours of study of the control group students and there is no significant association between the gain score and the hours of the experimental group students.

International Studies

Um and Eunjoon Rachel (2008) conducted as study on the effect of positive emotions on cognitive processes in Multi-media based learning.

The result showed that the positive emotions experienced during the learning improved the learner learning performance, motivation, satisfaction and perception toward the learning. It also indicated that positive emotions were generated by the aesthetic design of the learning material. The result of the study supported the facilitation hypothesis of positive emotions in the context of learning. The study implies that positive emotions should be considered as important

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   182

factors in instructional design and that emotional design principles should be studied in more detail for better instructional material design.

Kelly and Mary (2008) conducted a study on the use of Multi-media technology to enhance self-determination skill and encourage student leadership in educational goal planning for post-secondary students with asperser syndrome.

The intervention provided students with an opportunity to play a much greater role in planning than many had traditionally played and also provided an engaging medium for team members to learn more about the student an his or her goals. Students were observed engaging in significantly more self-determined behaviors after the intervention but other measures of self-planning were inconclusive therefore it is important for teachers and parents to continue to build on the momentum of the intervention and provide ongoing opportunities to foster newly acquired skills and behaviors. The mixed results may also mean that more long term, multi-component approaches to promote self-determinations skills and participation in educational goal.

Shao and Wei (2006) conducted a study on animating autonomous pedestrians.
The result indicated that the use of a computer-based Multimedia instructional module that integrated mind mapping of foreign culture reading as a treatment has a significant difference is student performance on cultural context knowledge, and had no significant difference in student performance on culture vocabulary knowledge when compared to the traditional instruction.

Chen and Rong - Ji (2006) conducted a study on power and reason: The construction of a mathematics teacher's pedagogical discourse and practices.

The findings of the study can contribute to a better understanding of how a teacher's construction of his pedagogical conceptions and practice is influenced by the social embedded with in a particular network of power relations might be challenged.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   183

Clerk and Danny (2005) conducted a study on the effected of using computer assisted instruction to assist high school geometry students achieve higher levels of success on the Florida Competency Achievement Test (FCAT)

The major findings concluded that the factors associated with having a student centered schools environment incorporating the use of computer technology to evaluate student achievement with the assistance of a collaborative learning environment did play a significant role in the positive increase in academic achievement on standardized test scores.

Lee (2004) conducted a study on the effect of intrinsic and extrinsic load on learning with computer based simulation.

The major findings were high intrinsic / extrinsic group has performed worse than other groups. There was significance difference between interaction effects of the instructional treatment conditions and individual differences.

Koeppen and Andre (2000) conducted a study on Internet as the goal of project linking at laws state University Fulbright-Hays projects abroad program.

This projects the linking established an international dialogue among middle school teachers and students in Moscow, Russia and in the United States. For each of five consecutive years, a new group of twelve as teachers joined a new group of twelve Russian teachers in Moscow to collaborate in developing curricular designed a prepare middle school youth to participate in a global society.

A major problem in evaluating the results of studies designed to measure the value of CAI is the elusive factor of the quality of the software used in the study. The software should be well designed, but there also must be a match between the objectives of the software (or

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   184

courseware), the understanding of the teacher as to how to apply it, and the needs or interests of the students.

Use of Computers by Chemistry Teachers

Most of the teachers are willing to incorporate computers into their curriculum when the obstacles are not overwhelming. The desired uses, however, include more than CAI. In fact, a relatively small number of chemistry teachers use computers for CAI in class room teaching and lab applications because there isn't enough hardware and because lab applications require both specialized hardware and software. The most widely used application appears to be word processing. Test and worksheet production takes the lead in this area, and customized laboratory activities are produced as well. Many chemistry teachers employ spreadsheet or customized or commercial grade book programs to record, calculate, and post student grades. Using test item banks to sort and select questions is becoming more popular as software and banks become more available. Finally, a small number of teachers are using computers to produce items such as crossword puzzles, word searches, posters, signs, and diagrams to support instructional activities.

A small but increasing number of chemistry teachers are using computers as a component in selected laboratory activities. CAI employ computers interfaced with commercial or "home-built" transducers. Using the appropriate software allows the computers to measure, record, graph, and analyze a variety of physical quantities: temperature, light, pH, pressure, and electrical and magnetic parameters, to list the most common. Some teachers create their own programs, in a computer language such as BASIC, that allow both students and teachers to evaluate the accuracy of laboratory data and/or calculations.

On the cutting edge of classroom computer applications, interactive videodisks are making their way into many science classrooms. Finally, students are increasingly being

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   185

introduced to computer database searching at school. Many high schools subscribe to databases on CD-ROM (compact disk, read-only memory). In addition, modems are used to access university and government databases at remote locations. Such databases range from libraries' online catalogs to scientific data being gathered from spacecraft and satellites.

Constraints of using Computers in Chemistry Classrooms

By far the major factor inhibiting computer use in the chemistry classroom is the insufficient amount of computer hardware and software available due to budgetary constraints. It often takes a chemistry department three to six years to obtain even the minimum number of computers necessary for one teacher to effectively incorporate CAI into the curriculum. Although just one or two computers can be incorporated into classroom activities, this number will support a very limited number of strategies. Moving computers in and out of a classroom is time consuming and significantly inhibits their use. Moving students to a "computer lab" also has several constraints, the two major ones being that the typical computer lab is too small and that teachers must compete for limited lab time.

The Ideal Computer Environment for Chemistry learners

An ideal computer learning environment, possible with current technology, might be an arrangement where each student has access to a "friendly" computer station consisting of high quality Computer Assisted Instruction, touch screen color displays and interactive video. At such a station each student could proceed at his or her own rate. Motivated students of the very highest ability might learn at three to four times the average classroom rate, completing two or three high school science courses a year. Students who seem to learn more slowly could be given extra months to complete a course without failure. The "average" student might elect to proceed at a pace equivalent to the conventional course.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   186

An important feature of the CAI would be the learner's ability to choose whether to proceed or to review when attempting to master course objectives. In addition, students would be encouraged to repeat for themselves demonstrations observed on the interactive videodisk. And, regardless of the degree of computer involvement, there must also be a substantial hands-on laboratory component integrated into each science course. CAI would also play a major role in the labs of the future.

Students in the ideal computer environment would also be encouraged (or required) to participate in cooperative activities as part of the chemistry course, perhaps in the form of problem solving activities that would not require that all students in a group be at the same level of instruction. Indeed, it might be very beneficial to create cooperative problem solving groups composed of students currently studying topics in different areas (i.e. earth science, biology, chemistry, and physics), or at differing levels of an integrated science curriculum.

Our Research Pursuit

After pursuing several studies on CAI, the research scholar (Suresh John Kennedy) chose the title "Technological approach of CAI in teaching Chemistry for higher secondary students" and started to work on it. The use of computer is multi-varied and especially to teach chemistry 10 units were selected and have started to work on it.

At the initial stage for the experimental study to know the level of the students an entry behavior test was conducted, which consisted of 150 items. The researcher has validated the entry behavior test and the discriminative and difficulty level of items were identified. As such, homogeneity was maintained to conduct experimental study through matching technique and the samples were selected. Many researchers have proved that the use of Computer Assisted Instruction would definitely influence the academic achievement of the learners.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   187

The researcher has made an attempt to teach XI standard students through CAI on the topics such as Electronic configuration and quantum numbers, Modern Periodic law, Electronic configuration and periodic table, Atomic and ionic radii, Ionization enthalpy, Electron Affinity, Electron Negativity, Screening constant, Stability, The solid state, Gaseous state, Colligative properties, Basic concepts of organic chemistry, Purification of organic compounds. This research will be very useful for the chemistry teachers to handle the student catering to their individual capabilities. So the researcher has planned to administer the pre-test and post test to the control and experimental group I and II (with discussion and without discussion).

Conclusion

The use of Computer in the Chemistry classroom is still in its infancy. Its overall effectiveness needs to be enhanced by better hardware and software as well as greatly increased availability of each. More research is needed to discover the most effective strategies for their use. The rate at which computers will be used to enhance education in chemistry and in other fields depends mainly upon state and national monetary commitment, followed by the willingness of individual schools to provide good in service programs. This technological approach of CAI in teaching chemistry for higher secondary students fulfill the gaps of students knowledge, understanding, application, skills of knowing chemistry in their day to day activities.

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References

1. Aggarwal, J.C., (2004) "History of Modern Indian Education". 5th Ed', Vikas house Pvt. New Delhi.
2. Aggarwal, Y.P(1990), Statistical Methods: Concept application and computation, Sterling publishers Pvt., Ltd., New Delhi
3. Best. W. John and Kahn, V.James (1999)., Research in Education., Prentice Hall of India Pvt. Ltd., New Delhi.

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   188

4. Kothari, C.R.,(2000) Research Methodology, Wishwa Prakashan Pvt Ltd., New Delhi.

5. Lokesh Koul,(1997), Methodology of Educational Research, Vikas Publishing House Pvt. Ltd., New Delhi.

6. Harley Hatin. (1999) Teachers: The Internet, Prentice-Hall of India Pvt., Ltd., New Delhi.

7. Pillai, R.S.N., and Bagavathi, V., (2000) Statistics, Sultan Chand and Co Ltd., New Delhi.

8. Rajasekar. S., Computer Education, Neelkamal Publication Pvt.Ltd.

9. Nirma M. Joseph and P. Annaraja (2006), "Conducted a study on teacher trainee's attitude towards information and communication technology.

10. Bobin Antony(2006) conducted a study on development of CAI package in IX standard computer science and its effectiveness.

11. Nirmala Sundarraj and Annaraja (2005) "Effectiveness of PowerPoint presentation in teaching zoology for higher secondary students.

12. Subramanian (2006) conducted a study on effectiveness of CAI for teaching triple column cash book at higher secondary level.

13. Subasri (2006) conducted a study on accessibility of power point presentations among high school and higher secondary school teachers in classroom teaching.

14. Helen Joy and Shiju (2005) conducted a study on development of CAI teaching material in history at higher secondary level and its effectiveness.

15. Antony Gracious (2005) conducted a study on development of hypermedia learning package in science for IX standard students and its effectiveness

16. Um and Eunjoon Rachel, (2008) "The effect of positive emotions on cognitive processes in Multi-media based learning", Dissertation Abstracts International, Vol.69, No.3, September 2008, 221 pp; DA 3213814.

17. Kelly and Mary (2008), "The use of Multi-media technology to enhance self determination skill & encourage student leadership in educational goal planning for post

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   189

secondary students with asperser syndrome", *Dissertation Abstracts International*, Vol.69,No.3, September, 2008,160pp; DA 3644689

18. Shao and Wei (2006) conducted a study on animating autonomous pedestrians.

19. Chen and Rong - Ji (2006) conducted a study on power and reason: The construction of a mathematics teacher's pedagogical discourse and practices.

20. Clerk and Danny (2005) conducted a study on the effected of using computer assisted instruction to assist high school geometry students achieve higher levels of success

on the Florida Competency Achievement Test (FCAT)

21. Lee (2004) conducted a study on the effect of intrinsic and extrinsic load on learning with computer based simulation.

22. Koeppen and Andre (2000) conducted a study on Internet as the goal of project linking at laws. State University Fulbright-Hays Projects Abroad Program.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   190

Impact of Multimedia Technology in Learning Biological Science on B.Ed. Trainees

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INTRODUCTION
The problem, method   adopted for the study, sample design, tools used for the study, and delimitations of the study are described   below. The aim of the study is to find out the effectiveness of Multimedia Technology in learning Biological Science.

NEED AND SIGNIFICANCE OF THE STUDY
Scoring centum or more marks is necessary to get seats in professional courses. Students face many problems to score more marks in science through conventional method.

Learning in biological science appears to pose more problems to the students due to traditional method of teaching. The researcher found out an innovative learning method Multimedia Technology which provided effective learning practice to learn Biological Science in the B.Ed. colleges.

OBJECTIVES
  1. To find out the learning problems of the students in learning Biological Science in B.Ed. colleges.
  2. To find out whether there is any significant difference in achievement mean score

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   **194**

between Pretest of Control group and Posttest of Control group in learning Biological Science by the students of B.Ed. classes.
3. To find out whether there is any significant difference in achievement mean score between Pretest of Experimental group and Posttest of Experimental group in learning Biological Science by the students of B.Ed. classes.
4. To find out whether there is any significant difference in achievement mean score between Posttest of control group and Posttest of Experimental group in learning Biological Science by the students of B.Ed. classes.
5. To find out the impact of Multimedia Technology in learning Biological Science in B.Ed. colleges in Coimbatore district.

HYPOTHESES
1. Students of B.Ed. have learning problems in learning Biological Science.
2. There will no significant difference in achievement mean score between Pretest of Control group and Posttest of Control group in learning Biological Science by the students of B.Ed. classes.
3. There is no significant difference in achievement mean score between Pretest of Experimental group and Posttest of Experimental group in learning Biological Science by the students of B.Ed. classes.
4. There will be no significant difference in achievement mean score between Post test of control group and Posttest of Experimental group in learning Biological Science by the students of B.Ed. classes.
5. Multimedia Technology is a more effective method than conventional method in learning Biological Science in Colleges of Education in Coimbatore district.

DELIMITATIONS
1. The study is confined to 160 B.Ed. students.
2. The study is confined to TNTEU students only.
3. The study is confined to state board syllabus of Biological Science subject only.
4. The study is confined to learning Biological Science only.

Method of Study
This experimental study was conducted to know the effectiveness of Multimedia Technology in enchancing the achievement in learning Biological Science at the B.Ed. level.

Sample Selected for the Study
The study is confined to 160 students of B.Ed., 80 Control and 80 Experimental.

Tool Used for the Study

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   **195**

The investigator made use of self-made achievement test as the tool for conducting the study.

Sample Selection for Pilot Study
The Question paper for the pilot study was distributed to 20 students of B.Ed. colleges in Coimbatore district. The selected students were considered as sample of the pilot study. These students were selected in such a way that they were not part of either the control group or experimental group. The same sample was utilized for subsequent test in order to validate the tool, namely, the question paper for achievement test for the final study.

Reliability of the Tool
The various methods used to work out the reliability of the test include spilt half method, equivalent or parallel form method, test-retest method and kuder-Richardson method .

Validity of the Tool
A test is said to be valid if it measures what it intends to measure .The expert opinion of the co-staff was obtained before freezing the design of the tools. Their opinion indicated that the tool had content validity .Thus spilt-half method was used to establish reliability.

Final Study
Sufficient copies of the revised tool were prepared and distributed to the selected sample of students of B.Ed. for control group as well as experimental group.

Data Collection and Analysis
A total of 160 students were selected as the sample for the study. 80 of the students constituted as the experimental group and the remaining 80 constituted as the control group.

Major Findings
1. It confirms that the colleges achieve the same score in pretest and posttest in traditional method in learning Biological Science. Hence it proves that students of B.Ed. have students of learning problems in learning Biological Science.
2. There is no significant difference in achievement mean score between
    Pretest of Control group and Posttest of Control group in learning
    Biological Science by the students of B.Ed . It establies that conventional method
  of teaching is not effective in learning Biological Science in B.Ed. classes.
3. There is significant difference in achievement mean score between Pretest of
    Experimental group and Posttest of Experimental group in learning Biological
    Science by the students of B.Ed. classes. It shows that Multimedia Technology is
  more effective in learning Biological Science in B.Ed colleges.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   **196**

4. Multimedia Technology is a more effective method than conventional method in learning Biological Science in B.Ed College in Coimbatore district .

Conclusion of the Study

Multimedia Technology is fairly a new area and its full potential is yet to be realized in the field of education . Any piece of knowledge on Multimedia Technology is a contribution to its knowledge base. In this way the research study of the investigator may be considered as a small but significant contribution to education . More studies that too, in different dimensions of Multimedia Technology learning is essential to understand its true worth. Hence, the research is not an end of the problem, but just a beginning of the search for innovation.

Educational Implications

Multimedia Technology can become an effective strategy in the class room teaching at the high school level.
1. Multgimedia Technology is effective for learning the subject of Biological Science and related subjects.
2. Multimedia Technology is well planned and executed. It becomes resourceful in upper primary level also.
3. Multimedia Technology enchances mutual understanding and co-operation among the students at all levels and in all subjects.
4. It provides the chance of learning to the students with the help of the lecturer at the Multimedia level.

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References

Apperson ,J. M.,et al. (2006) . The impact of presentation graphics on students experience in the classroom. Computer and Education,47(10,116-126)

Coole, G., et al.(2004) Mapping pedagogy and tools for effective learning design Computer and Education,43(1-2),17-33.

Kuhn,M.,et al. (2006). Computational modeling and simulation fostering new approaches in learning ty .

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   **197**

Differently Challenged Children and Education for All

Wasim Ahmad
Nazli

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Abstract

In India, we have many policies and programmes which aim at education for all particularly students with disabilities taken by government and non government organizations. The paper provides an in-depth and critical examination of efforts being undertaken under the Sarva Shiksha Abhiyan (SSA) towards the education of children with disabilities. This focus on SSA is essential as it is currently heralded as the biggest educational movement in the country and hence examining its approach towards the education of children with disabilities brings forth important issues. The focus of this paper is to examine the contribution of Education for All with special reference to children with special educational needs. In the beginning, the paper has focused on the conceptual framework of Education for All, its objective and its important components. A brief review of literature has been also included which exclusively talks about the negative and positive aspects of Education for All in order to highlight the journey of Education for All (SSA).

Keywords: Education for All, Children with Special Educational Needs

Introduction

Many disabled children and young people around the world are denied sustained access to basic education. Some of these disabled children never enter school, others start but make poor progress eventually 'dropping out', and it appears that a relatively small proportion are educated in a parallel system of special schools, running alongside mainstream schools. The drive to

achieve Education for All (EFA) by 2015 has led to a focus on the barriers to participation in basic education for marginalized groups (UNESCO, 2010).

Under India's federal constitution, education is a concern of both the central and state governments. Since independence, state governments have been the major providers of elementary education in India. However the wide differences between states in the emphasis they placed on education and in their capacity to invest in it, accentuated the disparities in the educational attainments of their people.

A recent study by the World Bank (2007), for example, noted that children with disability are five times more likely to be out of school than children belonging to scheduled castes or scheduled tribes (SC or ST). Moreover, when children with disability do attend school they rarely progress beyond the primary level, leading ultimately to lower employment chances and long-term income poverty.

Historical Development towards "Education for All"

Majumdar (2001: 123), analyzing educational provisions for various disadvantaged groups across different states, sums up the scenario for children with disabilities as:

Apparently, nothing is available other than a few government scholarships, facilities in the form of a couple of institutions for boys and girls and institutes 7 for training teachers for the disabled…for the intellectual disability, no conscious developmental scheme is focused on by any of the states.

Even though various efforts have been made in the recent past, both the rates of educational participation and outcomes of education, remain very poor for children and young adults with disabilities. Illiteracy rates for this group remain much higher than the general population and school attendance continues to lag behind that of non-disabled peers.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   199

Analysis of various government reports and policy documents clearly suggests that various policy frameworks have provided a significant impetus to efforts undertaken at the national level. The following four legislations have had a significant impact on the government and the NGO sector, of these the first three are specific to people with disabilities:

- Rehabilitation Council of India Act (1992): states that Children with Special Needs will be taught by a trained teacher.

- Persons with Disabilities Act (1995): educational entitlement for all Children with Special Needs up to 18 years in an appropriate environment.

- National Trust Act (1999): provide services and support to severely disabled children.

- The 86th Constitutional Amendment (2007): free and compulsory education to children, up to 14 years.

These legal mandates have also helped shape the comprehensive National Action Plan for Inclusion in Education of the Children and Persons with Disabilities (MHRD, 2005), and the National Policy for Persons with Disabilities in 2006 (an MSJE initiative).

With India becoming signatory to the Salamanca Statement (UNESCO, 1994), the 1990s saw the rapid incorporation of the term 'inclusive education' in various official documents, reports published by institutions such as the NCERT and media. The background paper of a workshop organized by the RCI stated:

"While special education began in India with the establishment of special schools, it was in 1960s–1970s that integrated education began to be advocated; however, after 1994, inclusive education is strongly recommended (RCI, 2001: 2)."

This focus on inclusive education is evident in the approach adopted by the District Primary Education Programme (DPEP). At a national workshop organized to discuss the role of inclusive education, the Director of Elementary Education and Literacy argued:

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   200

Zero rejection policy had to be adopted as every disabled child had to be educated. But multiple options could be used … [these] include inclusive 10 education, distance education, home-based education, itinerant model and even alternative schooling. (DPEP, 2001: 3)

The Sarva Siksha Abhiyan, SSA (into which DPEP was incorporated) thus extends the dual approach historically adopted towards the education of children with disabilities, by propagating a "multi-optional delivery system". It categorically brings the concerns of children with disabilities, or those it terms as "children with special needs (CWSN)" under the framework of "inclusive education" (IE):

SSA will ensure that every child with special needs, irrespective of the kind, category and degree of disability, is provided education in an appropriate environment. SSA will adopt 'zero rejection' policy so that no child is left out of the education system. (SSA, 2007:1)

SSA further extends the range of options from special and mainstream/ 'regular' schools to Education Guarantee Scheme/Alternative and Innovative Education (EGS/AIE) and Home Based Education (HBE). Therefore the implicit assumption that inclusion should strengthen or enable mainstream educational participation of children with disabilities does not necessarily hold true in the model proposed by SSA. Rather it seems to advocate a stance that education should be imparted in an environment that is most suited to the child's needs and there should be flexibility in planning. While the SSA objectives are expressed nationally, it is expected that various states and districts will endeavour to achieve universalisation in their own respective contexts and by 2010.

It therefore offers each district flexibility to plan for activities aimed at educating CWSN, depending on the number of children identified and the resources available to effectively implement the IE programme. While such flexibility might be regarded as a positive step, it is not surprising that this has resulted in many different models of inclusive education operative across the country- raising concerns about the quality and effectiveness of provision.

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   201

The Origin of Sarva Shiksha Abhiyan

The Sarva Shiksha Abhiyan, a central Government project is a historic stride towards achieving the long cherished goal of Universalisation of Elementary Education (UEE) through a time bound integrated approach, in partnership with State. The Education for All (SSA) is started in the year 2002 in 248 districts of 18 states in India. Programmes of Education for All (SSA) are implemented through concerned state government. In the beginning it was run by DPEP. Later, it was named as SSA.

A recent initiative of the Government of India to Universalize Elementary Education is Education for All (SSA). The programme aims at providing useful and relevant elementary education in the age group of 6-14 years by 2010 including children with disabilities. The 86th Constitutional Amendment, which has made free and compulsory education a right of all children from 6-14 years of age, has given further thrust to the goal of UEE. The objective of UEE cannot be achieved without including children with special needs under the ambit of elementary education.

Education for All is a response to the demand for quality basic education all over the country. However, UEE cannot be achieved unless children with special needs (CWSN) are also provided access to education. Hence, education of CWSN is an essential part of the SSA framework.

The project facilitates school building constructing facilities, developing educational resources, recruitment of normal school teachers and conducting teachers training programmes to them. As a part of project special educational teachers are appointed at the block level to meet and fulfill the special needs of children with disabilities. In addition orientation programmes for regular teachers are conducted on management of children with special needs in their class rooms. Because of these there may be changes in the perception of regular teachers and the parents of children with mental retardation with regard to the training and learning disabilities of children with mental retardation.

Experiences of programmes like DPEP and various research findings have shown that the number of children with special needs in every district is by no means small. The Ministry of Social Justice and Empowerment, which is a nodal Ministry for disability issues estimates the number of children having special needs as 5%. The Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995 provides that every child with a disability shall have access to free education up to 18 years of age. This is a statutory responsibility cast on all appropriate governments.

One of the focus areas of Education for All (SSA) is to increase access, enrolment, retention of all children and to reduce school drop outs. The emphasis of Education for All (SSA) is also on providing quality education to all children. Rarely has it been considered that the special educational needs of these children could be met by providing adequate resource support to them in regular schools and giving them an opportunity to receive education in the most appropriate environment. Hence, education of children with special needs is considered an important area in Education for All (SSA).

Objectives of Education for All (SSA)

The objectives of SSA mainly focus on increasing access, enrolment and retention of all children as well as improving the quality of education. The objectives of SSA can only be realized, if CWSN are also included under the ambit of elementary education. Realizing the importance of integrating special children in regular schools, SSA framework has made adequate provisions for educating CWSN.

- All children in school, Education Guarantee Centre, Alternate School, 'Back-to-School' camp by 2003

- All children complete five years of primary schooling by 2007

- All children complete eight years of elementary schooling by 2010

- Focus on elementary education of satisfactory quality with emphasis on education for life

- Bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010

- Universal retention by 2010.

Provisions for CWSN under Education for All (SSA)

SSA offers the following provisions to CWSN:

- Up to Rs.1200/- per child for integration of disabled children, as per specific proposal, per year

- District plan for children with special needs will be formulated within the Rs.1200 per child norm

- Involvement of resource institutions to be encouraged.

Approach and Options for CWSN in Education for All (SSA)

SSA ensures that every child with special needs, irrespective of the kind, category and degree of disability, is provided meaningful and quality education. Hence, SSA has adopted a zero rejection policy. This means that no child having special needs should be deprived of the right to education. This has also been strengthened by the 86th Amendment to the Constitution, which makes Elementary Education a fundamental right of every child. The SSA framework, in line with the Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995 mentions that a child with special needs should be taught in an environment, which is best, suited to his/her, learning needs. These might include special schools, EGS&AIE or even home-based education. SSA also offers each district, flexibility to plan for Inclusive Education (IE) activities, depending on the number of children identified and the resources available to effectively implement the IE programme.

Components of Education of CWSN under Education for All (SSA):

The interventions suggested under SSA for inclusive education of disabled children are as follows:

- Awareness
- Necessary infrastructure for planning and management
- Early detection and identification
- Functional and formal assessment
- Educational placement
- Preparation of Individualized Educational Plan
- Aids and appliances
- Teacher training
- Resource support
- Strengthening of special schools
- Removal of architectural barriers
- Monitoring and evaluation

The state implementation societies (SIS) will also undertake periodic monitoring, representatives of the national mission for UEE and national level institutions like NCTE,NIEPA, and NCERT will also undertake periodic monitoring provide resource support to the SIS to strengthen appraisal and monitoring systems. Efforts to associated autonomous institution willing to take up state specific responsibilities for research and evaluation will also be associated in developing effective tools for conducting achievement test, monitoring quality aspects of programme implementation, evaluation and research studies.

Need to Move Beyond Redistribution to Reorganization

Efforts aimed at the education of children with disabilities in India have been largely framed by the distributive paradigm of social justice, where the focus has been on equality in terms of

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   205

access and provision of resources (as evident from the overwhelming focus on aids, appliances and assistive devices). However working with such a conception of justice is rather limiting and has two basic flaws. Firstly, it is too individualistic in its perspective and locates the problem 'within' the child, and secondly it takes attention away from questioning how social structures and institutions uphold patterns of injustice.

On one hand, it can be argued that this focus on redistribution of resources and access is desirable and important, as children with disabilities tend to belong to the lower economic strata, and without these special schemes are likely to remain deprived of basic essentials. However, such a narrow focus on structural issues is wholly inadequate and does not deliver the whole of justice. Here the tendency is to 'fix' first level concerns, wherein access does not automatically deliver equality.

Evidence from Singal (2006) and Jha (2002) suggests that awareness of a concept, such as 'inclusive education' is no guarantee for ensuring that the desired teaching-learning practices are in place. Changes in the classroom require simultaneous development of reforms in professional development, curriculum, alongside a change in attitudes and beliefs as reflected in the culture of the school. While it is essential that teachers are made aware of and assisted in developing innovative teaching strategies, such a skewed focus on knowledge underplays the need for focusing upon and changing values, beliefs and attitudes. There is a need for re-examining perceptions around the values and purposes of education for children with disabilities. The on-going debates around 'inclusion' in India might provide the impetus for a critical reflection on the current teaching practices and educational policies. Inclusion needs a different school culture, and this might be an opportunity for the Indian education system to 36 critically re-examine its many failings to enable the purposeful participation of the nation's children.

"It should, and will be our objective to make mainstream education not just available but accessible, affordable and appropriate for students with disabilities. I also believe that if we make our schools accessible to children with disabilities, we will also be improving the quality of education for all children."

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   206

Statement made in the Rajya Sabha on 21.3.2005 by the Minister for Human Resource Development on the subject of the Inclusive Education of Children with Disabilities shift this to a more appropriate place

Conclusion

Education of children with special needs is a relatively new concept and requires a great deal of technical expertise to deal with the needs of children having different kinds of impairments. The programme of Education for All especially for children with special needs could be developed by each state and district. In view of the zero rejection policy adopted by Education for All (SSA) for children with special needs and in view of the fact that some children with severely disabled may require specialized services, a variety of options that could be offered to those children who cannot benefit fully by going to regular schools. Hence there is a dire need to sensitize, educate and train the regular teachers in order to equip them for effective educational management of children with special educational needs.

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References

District Primary Education Programme (2001). A report on national level workshop: Towards inclusive schools in DPEP. Noida: Ed.CIL.

Jha, M. M. (2002). Schools without walls. Inclusive Education for All. Oxford: Heinemann.

Majumdar, S. (2001). Educational programmes for the disadvantaged groups. In M.

Mukhopadhyay and R. S. Tyagi (Eds.), Governance of School Education in India. New Delhi: NIEPA.

Ministry of Human Resource Development (2004). Education for all: India marches ahead. New Delhi: Government of India.

Language in India www.languageinindia.com
13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
Editors: P. Udayakumar, M.Sc., M.Phil., M.Ed., M.A., Ph.D. Candidate,
Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   207

Sarva Shiksha Abhiyan (2005). NGO initiative in inclusion: SSA experience. Delhi: Department of EE&L (MHRD).

Sarva Shiksha Abhiyan (2006). Discovering new paths in inclusion. A documentation of Home based education practices for CWSN in SSA. Delhi: Department of EE&L (MHRD).

Sarva Shiksha Abhiyan (2007). Inclusive education in SSA. Available at: 164.100.51.121/inclusive-education/Inclusive_Edu_May07.pdf

Singal, N. (2006b). An ecosystemic approach for understanding inclusive education: An Indian case study. European Journal of Psychology of Education, Special issue: Ten years after Salamanca, XXI (3): p. 239-252.

UNESCO (1994). The Salamanca Statement and Framework for Action on Special Needs Education. Madrid: UNESCO/Ministry of Education and Science.

World Bank (2007). People with Disabilities in India: From Commitments to Outcomes. New Delhi: Human Development Unit, South Asia Region.

http://unesdoc.unesco.org/images/0018/001866/186611e.pdf

http://www.create-rpc.org/pdf_documents/PTA36.pdf

http://www.educationforallinindia.com/

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   209

Value Education -- The Need of the Hour

K. Premalakshmi, Ph.D.
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Abstract

Education is a powerful and pervasive agent for all round development, individual and social transformation. This alone can sustain culture and civilization. Education should lead to the development of integrated personality and inculcate values like patriotism. Spirit of national unity and a healthy appreciation of the rich variety of cultural expressions and promote a humanistic out look. Value education is a many-sided endeavor as value itself. The theory and practice of value education speak to emotional, rational and active selves of individuals. It helps individuals to resolve or accept conflicts with others and to realize their beliefs in action. The school authorities can organize various activities and functions for the purpose of inculcation of values in the students. The Head of the Institution and the Teaching Staff can play and organize a number of programmes for this purpose.

Introduction

The values are taught by the Family, Society, Religious organizations, formal and informal education system and NGOs, etc. However, more stress on value education may be laid at the school level as these are the formative years of children. Child is the future of the country. We must develop them thoughtfully. The fulfillment of the basic needs leads to a higher set of socio-political needs and ultimately to the goal of the full flowering of human personality or total development and the release of the creative energies of every individual. In all these, values play an important role.

Education is a systematic attempt towards human learning. All learning is subjective and self-related. Educational activity starts with the individual. Knowledge should not be made remote from individual reality and irrelevant to the individual. Knowledge can never be 'learned'. Knowledge is the

fruit of experience and experience is the sensation of the individual. Individual experience is an internal happening and is the function of awareness.

Education is a powerful and pervasive agent for all round development and social transformation. This alone can sustain culture and civilization.

Students can be enabled to acquire intellectual, democratic and aesthetic values and a deeply felt concern for the environment. The content of value-Oriented education should include:

* Earning of knowledge and capacity to utilize it for the good of the Society.
* Democratic education
* Aesthetic education
* Course in ethics
* Spiritual education
* Provision for activities involving values.

Importance of Value Education

Education should lead to the development of integrated personality and inculcate values like patriotism. Spirit of national unity and a healthy appreciation of the rich variety of cultural expressions and promote a humanistic outlook.

Education is a cultural phenomenon or cultural action. It is demonstrated in the sense that the culture and education promote each other mutually. Each culture develops its own specific form for its illumination, tradition and development. In other words, culture creates education. Thus culture and education show themselves to be essential criteria for human existence as such. According to Jones (1979) "Education has to its content a particular objective-the independence of the individual, which essentially comprehends the capacity for responsibility and with the achievement of this, a particular end in time".

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13 : 2 February 2013
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   211

Views of Different Commissions Relating to Promotion of Values

Several educationists in India and abroad have stressed the importance of promoting values through education, which is facing the crisis of character in different spheres of life. **Radhakrishnan Commission** (1949) held the view that in addition to the search for truth through scientific and scholarly pursuits an important task of education is a concern with values.

Kothari Commission (1964-66) with its emphasis on education's role in national development includes among the functions of higher education cultivation of right interest, Attitudes, moral and intellectual values. The **National Policy on Education** (1986) observes, "The growing concern over the erosion of essential values and an increasing cynicism in the society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values".

Aims of Value Oriented Education

The inseparable link between education and values is evident in the nature and aim of education. The primary task of education is the creative extension of knowledge but it is not the total task. If education has a relationship with the meaning of life then a proper value orientation of education becomes imperative. Morality depends on the orchestration of human caring, objective thinking and determined action. As a stimulus or motivation, caring seems to come from the gut. To care about others is not only to want to consider their needs but to be able to do so. Thus caring involves both social motivation and social knowledge. Learning to care about people is learning to know about them as well. Caring is not totally removed from reassuring but reassuring is district from caring. The reassuring inherent in negotiating situations of moral problem or moral conflict is thus more complex than the reassuring involved in caring.

Value education is a many-sided endeavor as value itself. The theory and practice of value education speak to emotional, rational and active selves of individuals. It helps individuals to resolve or accept conflicts with others and to realize their beliefs in action. The value education does not deliver moral answers or prescribe practices but it is concerned to make morality a living concern for

212

students to breathe moral life. It cultivates the moral sensitivity and sharpens reasoning of young people to create a more just society.

Approaches to Value Oriented Education

The development of values is not a very easy job. There is no magic formula, technique or strategy for the inculcation and development of values. The process of value education is a very complicated task influenced by a variety of hereditary and environmental factors. Generally value education programs involve direct, indirect or incidental approaches of value development. Direct, indirect or incidental approach refers to deliberate, systematic instruction in specially provided periods in the school time table. Direct approach means teaching values directly to others. The approach may work for some time but many a time, it has its disadvantages. There may be reaction of the learners and sometimes they may give opposite opinions. That can prove rather more dangerous.

Indirect approach of teaching values is more convenient, effective and lasting. Here teaching is done indirectly. The learner reads books and is able to catch up values of life here and there. In day to day life situations, he learns values through his exposure to the world.

Formal and Informal Approach

When the learners are taught about difficult values by using formal ways, it may not leave much effect. Here, materials from books are taught with a motive of teaching certain values. Television is shown by using formal situations in order to inculcate different values.

On the other hand, in informal approach, the learner or the receiver of values is unaware of values. He reads some material from the books and is able to pick up values of life incident by incident. This type of learning is of greater value and lasts longer.

Curricular and Co-curricular Approach

According to curricular approach separate syllabus is framed which aims at teaching values to the learners. The syllabus is prescribed and teaching is done to finish the syllabus. In the text-books, the values may be integrated in different chapters. Thus the students have curricular programmer which helps them to learn different values.

In co-curricular programmes, different activities such as singing, poem recitation, drama, debate, declamation contest, essay writing, competition etc are organized with a motive of inculcating different values of life in the students. There can be social service activities, physical exercise, games and sports. Different activities will help in the inculcation of variety of values in students.

Ways and Means for the Inculcation of Values in Schools

The school authorities can organize various activities and functions for the purpose of inculcation of values in the students. The Head of the Institution and the Teaching Staff can play and organize a number of programmers for this purpose. A few such programmers are briefly explained here:

- The text books prescribed for the students should contain stories with certain moral lessons. Teachers interested in writing text books for the children can help in making the text books of this type. Even supplementary readers or books for the children may be written by some teachers in collaboration with others and help in the achievement of this goal.
- Prizes may be given to the deserving students for showing honesty, bravery, gallantry, truth etc. The award of prizes be given to the students in social gathering or functions.
- Declamation contest may be organized in the institution on themes related to values of life. The contest may be intra-school and inter-school. Participation in the contest by way of speakers and also by way of audience will have a good deal of impact.
- National service scheme (N.S.S) need to be popularized and its programme of activities be organized vigorously. The students interested in social service at the railway station, at the general bus stand, in the social festivals, is the hospitals, in the villages,

in the slum areas be able to do a lot. In this way they will imbibe values of life permanently.

Implications of Value Education

It has been rightly contended that peace is a most desirable objects of the present world and that peace cannot be achieved unless individuals and increasing masses of people contemplate and practice ethical and spiritual values such as those of unity, harmony, mutuality, friendship faithfulness, sincerity and respect for diversity.

Moral and spiritual values are the foundations of the highest peaks of civilizat6ion science, morality and spirituality are intimately intertwined and they should not be viewed as antagonistic to each other. Indeed, the survival of human race at the present critical juncture of human history will depend upon the pursuit of ethical and spiritual values.

Conclusion

Values and education are interdependent and inseparable. Education leads to cultivation of values and the cherished values of the society provide direction to the very educative process. Thus inculcation of values in the curriculum and co-curricular and activities helps the students to imbibe the values from various sources which helps the students to lead an independent, value-based life throughout the life which indirectly helps for bright future of the nation.

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Sources Used:

Aruna Goel & Dr. S. L. Goel (1992) Human values and education, Deep and Deep Publications Pvt. New Delhi – 110 027.

R.S. Bhandari (1998). Value Education. Abhishek Publications, Chandigarh.

Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   215

Dhananjay Joshi (1997) Value Education in Global Perspective,

Lotus Press. New Delhi – 110 002.

Ghose.(1995) Atext book of value Education. Dominant publishers and Distributors. New Delhi – 110 002.

V.C. Pandey.(2001) Education culture and Human values. Isha Books.   Delhi – 110 033.

B.K. Passi, Prabhakar Singh. (2000) Value Educations. National Psychological Corporation, Agra – 282 004.

N. Venkataiah. (2000) Value Educaion. APH Publishing Corporation, New Delhi – 110 002.
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   216

Effectiveness of Computer in Teaching Chemistry

Dr. (Mrs.) S.P. Denisia, Ph.D. and A. Suresh John Kennedy, M.Sc., M.Ed.

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Abstract

The aim of this study is to develop and then evaluate the effectiveness of Computer in teaching chemistry for higher education. Learners may be classified into three categories namely fast, average, slow learners. To make all learners learn the subjects on their own speed computer is very useful. That is the opportunity for educator and learners to create innovative ideas to learn chemistry. This research suggests that computer may give benefit to both educator and learners. There is, however, limited research about the application of computer is presently available in teaching chemistry for higher education. Here the researcher describes the use of computer in the teaching and learning of chemistry in higher education. Evaluation of learner's performance by quantitative and qualitative means suggests that computer has led to enhance learning for a variety of chemistry topics in this educational setting. As this is the first attempt in deploying computer in teaching chemistry concepts in higher education, educator is primarily employed to teach chemistry with computer. This paper highlights a personal experience and a case study of implementing computer and the effect of learner's performance in this study. Through hypotheses testing, higher education is clearly possible that employing computer in educational settings proves to have significant effect on learner's performance. So the implementation of learner centered approach is successfully done in computer method of teaching. In this research paper, researcher has tried to bring a definition of computer and the way of using different types of innovative techniques to teach chemistry in higher education.

Introduction

Computer use by any teacher is a function of his or her computer experience and expertise, availability of hardware and software, and perceived need. An excellent chemistry course may be taught without the use of a computer. However, the careful incorporation of computers into a chemistry course can and does add an important level of enhancement. Although not as conclusive as one might hope, studies do indicate that computer use in chemistry education can improve learning and positively influence students' attitudes and self-esteem. The importance of using computers in a chemistry class may not be limited to the ability of Computer to improve

217

learning. Rather, computer use adds another dimension to the teacher's repertoire of strategies, which may improve overall learning. Another important reason to include student computer use in a chemistry course is that most (if not all) students, especially those planning a career in chemistry, will be required to be computer literate. As students interact with computers in a variety of ways within their chemistry courses, their degree of computer awareness and literacy will increase.

Review of Literature

The following studies found positive effects associated with computer use in science education applications:

Indian Studies

Bobin Antony (2006) conducted a study on development of CAI package in IX standard computer science and its effectiveness. The major findings were the experimental groups obtained a higher mean then the control group. The sex wise comparison is insignificant. There is no significant association between the gain score and the hours of study of the control group students and there is no significant association between the gain score and the hours of study of the experimental group students.

Nirumala Sundaraj and Annaraja (2005) conducted a study on effectiveness of power point presentation in teaching zoology for higher secondary students. The major findings were there was significant difference between the pre-test and the post-test scores of the students. There was significant difference pre-test and post-test scores of the students in attainment of knowledge, understanding and skill objectives. That is experimental group students are better than the control group students.

Subramanian (2006) conducted a study on effectiveness of CAI for teaching triple column cash book at higher secondary level. The major findings were CAI package significantly improved the performance of students in learning accountancy of higher secondary school. Male students do not differ much from their female counter park in their academic achievements even after exposes to CAI.

Subasri (2006) conducted a study on accessibility of power point presentations among high school and higher secondary school teachers in classroom teaching. The major findings there is high significant relationship between the fundamental knowledge of computer among the teachers power point accessibility in class room teaching. Urban teachers are found to utilize power point presentations more effectively in class room teaching when compared teachers.

218

There is no significant difference between the high school and higher secondary school teachers in utilizing the power point presentation in class room teaching.

International Studies

Kelly and Mary (2008) conducted a study on the use of Multi-media technology to enhance self-determination skill and encourage student leadership in educational goal planning for post-secondary students with asperser syndrome. The intervention provided students with an opportunity to play a much greater role in planning than many had traditionally played and also provided an engaging medium for team members to learn more about the student an his or her goals. Students were observed engaging in significantly more self-determined behaviors after the intervention but other measures of self-planning were inconclusive therefore it is important for teachers and parents to continue to build on the momentum of the intervention and provide ongoing opportunities to foster newly acquired skills and behaviors. The mixed results may also mean that more long term, multi-component approaches to promote self-determinations skills and participation in educational goal.

Shao and Wei (2006) conducted a study on animating autonomous pedestrians. The result indicated that the use of a computer-based Multi-media instructional module that integrated mind mapping of foreign culture reading as a treatment has a significant difference is student performance on cultural context knowledge, and had no significant difference in student performance on culture vocabulary knowledge when compared to the traditional instruction.

Chen and Rong-Ji (2006) conducted a study on power and reason: The construction of a mathematics teacher's pedagogical discourse and practices. The findings of the study can contribute to a better understanding of how a teacher's construction of his pedagogical conceptions and practice is influenced by the social embedded with in a particular network of power relations might be challenged.

Clerk and Danny (2005) conducted a study on the effected of using computer assisted instruction to assist high school geometry students achieve higher levels of success on the Florida Competency Achievement Test (FCAT). The major findings concluded that the factors associated with having a student centered schools environment incorporating the use of computer technology to evaluate student achievement with the assistance of a collaborative learning environment did play a significant role in the positive increase in academic achievement on standardized test scores.

Lee (2004) conducted a study on the effect of intrinsic and extrinsic load on learning with computer based simulation. The major findings were high intrinsic/extrinsic group has performed

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13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   219

worse than other groups. There was significance difference between interaction effects of the instructional treatment conditions and individual differences.

Operational Definitions

Effectiveness

Effectiveness is the capability of producing a desired result. When something is deemed effective, it means it has an intended or expected outcome, or produces a deep, vivid impression. The word "effective" means creative, productive or effective.

Computer

Computer may be defined as the use of a computer as an integral part of an instructional system, the learner generally engaging in two-way interaction with the computer via terminal. Computer assisted instruction is a package developed by the investigator for the corresponding units in chemistry for higher secondary students.

Chemistry

Chemistry is a branch of science which deals with elements, compounds, their structures and properties. Teaching in Chemistry plays a very vital role at the higher secondary level.

Teaching

Teaching is an ability to express the subjects without any difficulty in simple easy and correct method of explaining the subjects.

Teaching of Chemistry–Aims

The practical aim of the study of teaching chemistry would be to acquaint the student with the rudiments of its day to day activities of knowing to use chemicals give him a grasp of its teaching and learning by doing; to enable him to express himself clearly; to make it possible for him to write correctly so that he can communicate his every day ideas to another without ambiguity, to compose business letters, to converse freely and fluently and to write a number of lines on a given topic correctly. Chemistry, being a well-developed science, in its importance among other sciences is a mirror of the day to day of life of the people living and experiencing that science of chemistry. The need and importance of teaching Chemistry in schools, therefore, is to inculcate in the student an ability to express his / her every day to day activity in enjoying

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13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   220

and experience without any difficulty in simple easy and correct science of chemistry. In short the aim of teaching Chemistry is to give pupils a basic all round command of understanding Chemistry.

Importance of chemistry

Throughout the history of the human race, people have struggled to make sense of the world around them. Through the branch of science we call chemistry we have gained an understanding of the matter which makes up our world and of the interactions between particles on which it depends. The ancient Greek philosophers had their own ideas of the nature of matter, proposing atoms as the smallest indivisible particles. However, although these ideas seems to fit with modern models of matter, so many other Ancient Greek ideas were wrong that chemistry cannot truly be said to have started there. Alchemy was a mixture of scientific investigation and mystical quest, with strands of philosophy from Greece, China, Egypt and Arabia mixed in. The main aims of alchemy that emerged with time were the quest for the elixir of life (the drinking of which would endow the alchemist with immortality), and the search for the philosopher's stone, which would turn base metals into gold. Improbable as these ideas might seem today, the alchemists continued their quests for around 2000 years and achieved some remarkable successes, even if the elixir of life and the philosopher's stone never appeared. Towards the end of the eighteenth century, pioneering work by Antoine and Marie Lavoisier and by John Dalton on the chemistry of air and the atomic nature of matter paved the way for modern chemistry. During the nineteenth century chemists worked steadily towards an understanding of the relationships between the different chemical elements and the way they react together. A great body of work was built up from careful observation and experimentation until the relationship which we now represent as the periodic table emerged. This brought order to the chemical world, and from then on chemists have never looked back.

Modern society looks to chemists to produce, amongst many things, healing drugs, pesticides and fertilizers to ensure better crops and chemicals for the many synthetic materials produced in the 21st century. It also looks for an academic understanding of how matter works and how the environment might be protected from the source of pollutants. Fortunately, chemistry holds many of the answers. Following the progressing trend in chemistry, it enters into other branches of chemistry and answers for all those miracles that are found in all living organisms.

Conclusion

The use of Computer in the Chemistry classroom is still in its infancy. Its overall effectiveness needs to be enhanced by better hardware and software as well as greatly increased availability of

each. More research is needed to discover the most effective strategies for their use. The rate at which computers will be used to enhance education in chemistry and in other fields depends mainly upon state and national monetary commitment, followed by the willingness of individual schools to provide good in service programs. This effectiveness of computer in teaching chemistry for higher secondary students fulfill the gaps of students' knowledge, understanding, application, skills of knowing chemistry in their day to day activities.

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References

1. Best. W. John and Kahn, V.James (1999)., Research in Education., Prentice Hall of India Pvt. Ltd., New Delhi.

2. Kothari,C.R.,(2000) Research Methodology, Wishwa prakashan Pvt Ltd., New Delhi

3. Lokesh Koul,(1997), Methodology of Educational Research, Vikas publishing house Pvt. Ltd., New Delhi

4. Harley Hatin,(1999) Teachers: The Internet", Prentice Hall of India Pvt., Ltd., New Delhi

5. Pillai, R.S.N., and Bagavathi, V.,(2000) Statistics, Sultan Chand and Co Ltd., New Delhi

6. Rajasekar. S., Computer Education, Neelkamal Publication pvt.Ltd

9. Nirma M. Joseph and Dr. P. Annaraja (2006), "Conducted a study on teacher trainee's attitude towards information and communication technology

10. Bobin Antony (2006) conducted a study on development of CAI package in IX standard computer science and its effectiveness.

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Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   223

Use of Information and Communication Technology in Teaching-Learning Process

Manjula. K. Swamy

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ICT and Education

This article provides a glimpse of the use of information and communication technology (ICT) in every walk of our life and it discusses the various modes for the teachers and teacher educators as well as students to make use of these technologies for the classroom transaction. It gives a brief account of blending technology with other methods in our classroom to make children learn more efficiently taking advantage of knowledge and information explosion. The article argues in favor of looking beyond the current class room and to think of the technology as an integral part of the schooling process. This is what the concept of Smart School is all about. Give the technology to the students and get the best out of them is the theme of this paper.

Education is often regarded as synonymous with learning, as the acquired intellectual, emotional or sensorimotor experience. Education is a product of experience. It is the process by which and through the experience of the race, i.e., knowledge, skills and attitudes are transmitted to the members of the community. John Dewey speaks of "education as that reconstruction or reorganization of experience which adds to the meaning of experience and which increases ability to direct the course of subsequent experiences." The child is subjected to certain experiences that are intended to modify its behaviour for proper adjustment to a changing environment.

Education adjustment of the child is conditioned by the nature and demands of the society to which the child should be adapted and attuned: so what could pass for superior adjustment a few centuries ago needs modification. The most distinctive feature of the modern society is its information and communication technology. The main aim of education was interpreted to be the preservation of this accumulated treasure. And knowledge in every subject is cumulative, so that

as each year passes, there is more to be learnt, and keep pace with this advance in knowledge. For all this ICT provides the necessary answer to all these queries.

ICT influences nearly all aspects of human life and are become part of our daily experience at an increasing pace. The educational administrators and teacher educators' have realized these rapid advancements in ICT and its tremendous potential to revolutionize education, particularly school education. This implies that the curriculum for all pupils will have to place some emphasis on technological change and its implications. Such a curriculum should ensure that all students, no matter what their future holds, are able to use technology, to communicate effectively with and though the communication technologies to appreciate their limitations. Since our society heavily depends on ICT in many aspects of work and personal life. It will expect our schools to familiarize pupils with computers an their application during their schooling. Hence the National Curriculum Framework for School Education (2000) rightly states that "the new technology has tremendous potential to revolunise education and transforms school dramatically … Integration of ICT into schooling would promote computer aided learning and finally computer based learning thought the country.

Learning through ICT

Like other teaching aids, computer and the internet (computer mediated communication) are effective only when they are used to meet specific learning needs and when they enhance the learning experiences for the students. Computer assisted learning does not mean replacing teachers with computers but it only means that has to do with anyone or a combination of the following:

- Reinforcement of important concepts using drill and practice software packages.
- Construction of a question bank giving appropriate feedback during preparation for examination.
- Study of simulation software to model real world problems or simulate experiments, which would be impractical to perform in the laboratory.

- Students acquiring a range of ICT skills like word processing, presentations, use of spreadsheets, email, publishing newsletter in the web, handling databases, and use different types of computer assisted material.
- Introducing new concepts via micro-environment, which allows students to structure their own learning.
- Information retrieval exercises from the internet pertaining to the curriculum.
- Collaborative projects using e-mail, video conferencing, a shared website or a local network.
- E-mail notice boards to encourage student's discussion.
- Establishing a newsletter, notice board for a course or module.
- Resource materials and teaching points posted in the web to help students prepare for tutorials.

Based on the above, we can make use of the following for the teaching learning process:

1. **Drill and practice mode**: In this mode the computer is programmed so as to present the learner with a number of exercises which she/ he must complete by providing some response. It is possible to build a performance profile on the basis of responses for individual learners. If the software packages can utilize the computer potential to make drill and purposeful to each learner then effective learning would be achieved.

2. **Tutorial mode:** In this mode of learning, learners are seated in front of the computer all learning takes place in their own way and at their won pace. Intelligent tutorial programs provide control over both strategy and manipulation of content and are an improvement over the conventional tutorials, they can support student defined goals and request for help with much greater flexibility.

3. **Stimulation and games mode:** The design of simulation is based on popperian scientific method. Namely a paradigmatic learning situation that

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   226

can acts a model. As a scientists learns about the real world, so the students learns about the world modeled by the computer (Laurillard 1987).

The advantages of using computer as a teaching learning tool when simulation software is used are as follows:

- Many scientific experiments would be far too expensive in materials and equipment. Hence, computer based simulations might provide some experience of investigating the phenomenon involved in such experiments.
- When experiments are presented are presented on the screen of a compute, variable factors are under the learner's control. They can take a greater part in controlling the direction of their investigation.
- The activities undertaken in simulation make far more sense to young learners than decontextualised exercises focusing on isolated skills.

4. Modelling mode: Modeling on the computer with suitable software is similar to the simulation. In that both help the learner to learn by working with an analogue of a real life system or a phenomenon.

5. Word processor: A word processor is an extremely useful package in that student will be able to write a good story or write out a neat laboratory is their editing capacity.

Information applications and communication system have the following characteristics which are useful to both the teacher and learner.

1. Electronic information course with access to worldwide databases of information.
2. Interactive and easy to use information exchange medium
3. A tool to facilitate collaborative learning projects.
4. An access to publish electronic portfolios of teaching activities in the web.

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13 : 2 February 2013
Jayanthi College of Education Seminar on *Current Perspectives on Education*
Editors: P. Udayakumar, M.Sc., M.Phil., M.Ed., M.A., Ph.D. Candidate,
Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   227

To conclude we are gratified at the significant advances in the field of education, in its basic theory as well as in its tools and techniques as these augur well for human welfare. At the same time we are aware of the conflicts and contradictions that have appeared o the educational arena. Recent developments like performance contracting, cost effectiveness and accountability give the noble task of teaching.

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References

1. Information technology in schools: curriculum Guide and syllabus (2001). NCERT, New Delhi.
2. Journal of Indian Education (2002).
3. Introduction to educational Technology (2004). By K. Sampath , A. Panneerselvam and S. Santhanam.
4. Raghavan S.S. (1987) Media and technology for H.R. development.

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Language in India www.languageinindia.com
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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   228

Emerging Technology of Smart Class Teaching for Secondary School Teachers

T. Jeya Selva Kumari and Dr. S. P. Denisia, Ph.D.
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Introduction

To participate in the nation building tasks, the capacities required in the students in their formative years they spend in the educational institutions are: the capacity for research or inquiry, capacity for creativity or innovation, the capacity for moral leadership, and the capacity to use higher technology (Dr. A.P.J. Abdul Kalam). The emerging technology of smart class teaching will help acquire these capacities.

SMART Assessment

S – Specified

M – Measurable

A – Achievable

R – Relevant

T – Time restricted

Thus SMART is an innovative way of assessing main key skills: knowledge acquisition, knowledge imparting, knowledge creation, and knowledge sharing.

On-line Teaching

On-line teaching is an educational process in which the teaching occurs when the student and the teacher are not in the same place and internet technology is used to provide a communication link between the teacher and students.

Computer-mediated learning involves many radical changes in communication patterns. Instructional designers, subject experts and programmers should sit together for preparation of On-line teaching material. It is made by preparing interactive learning packages. The material should contain teaching, reviewing and testing components and can be delivered through website or from a central location.

1. **Content and Design of an On-line Teaching Material**

The scope of the material should be determined and a creative treatment should be made. The subject expert should specify what will be taught and how it will be presented. Video format suits this presentation. By adopting such a format, the content and design phase results in the delivery of a course Architecture or Blue print. It is a detailed outline of instructional material that is being sequenced and structured. Designers work with the artists and programmers to define the creative treatment and plan the strategies for instructional presentation. The hardware and software delivery systems should be specified by the engineering wing. They review the options of the play back systems as well as the connection speed. Language, graphics packages and audio editing tools also should be utilized for better teaching.

A story board is written on the basis of the script or treatment on the course of teaching. A story boards is a written plan for a discrete unit of instruction.

A story board includes

- A description of the overall scene and action for the topic.
- Narration scripts for spoken audio voice.
- Onscreen text that the viewer will read
- Test questions/strategy with feedback.
- Descriptions of visuals to be displayed.
- Descriptions of music and sound effects.
- File names for all multimedia elements.

2. **Developing On-line Teaching**

An instructional system should be developed for On-line Teaching. It is a systematic approach to designing, producing, delivering and evaluating. For this the following are to be determined.

➢ Who is the learner (Audience profile)
➢ What does the learner need to learn (Objectives)
➢ What will enable that learning)Content analysis)
➢ What would be the best way to present it (Instructional strategy)
➢ How can one make sure that it has been learned (Evaluation)

On-line Teaching is Web based and interactive.

This approach requires a modem, standard communication software and an on-line information service account with an internet service provider. The costs include, On-line Service fee, a per hour connect charge and where applicable e-mail service charges.

3. **Benefits of On-line Teaching**

> **Reduced learning time:** Interactive technologies reduce learning time.

> **Reduced cost:** The primary costs of On-line Teaching material in interactive mode lie in design and production and fixed resources can be utilized for it (internet connection).

> **Instructional consistency:** Technology based instructional system do not forget to cover key points.

> **Privacy:** Students are free to seek information and to respond at their own speed without embarrassment or slowing down an entire class.

> **Mastery of learning:** Unlike normal classroom situations, an interactive system will not move on to new material until the current material is mastered.

> **Increased retention:** The process of interaction with On-line Teaching material provides strong learning reinforcement that significantly increases content retention over time.

> **Increased safety:** With interactive systems, students can explore any subject from within the safety of the learning environment.

> **Increased motivation:** On-line Teaching provides a level of responsive feedback and individual involvement that is highly motivating in individual as well as classroom learning environment.

> **Increased access:** Interactive systems can provide greater and more equal access to quality teaching. They can be used to simulate laboratory equipment that is generally too expensive to make available to each student.

> **Enjoyment of interactive learning:** Interactive systems allow learners to take greater control of, and hence responsibility for, their own learning process. As learning progress, they will experience that learning can be enjoyable, even fun!

On-line Teaching provides convenient program distribution to multiple locations. It accurately manages and measures each stage of the program's execution. It broadly supports advanced multimedia technologies involving audio and video, animations. On-line Learning provides facts and easy access to course is for learners and also to accurate and timely reports at a click of the mouse. It can change and update the content matter from one central location.

Classroom Teacher and Home School Supplies

Committed to helping teachers, parents, daycare providers, tutors and home schooling, families find the materials they need to teach their children and students. Get Smart about the supplies you purchase for your teaching and educational needs.

When looking for materials to supply your classroom such as bulletin boards, borders, creative decorations, books, test taking helpers, basic skills resources, stickers, student awards, class furniture and so much more you need to take into consideration its usefulness as well as its longevity.

As a teaching consultant, Classroom Teacher/Homeschooling parent I understand your need to find educational materials that fit your teaching style as well as your students learning styles.

Smart Classrooms

What is a Smart Classroom?

A Smart classroom is a classroom that has an instructor station equipped with computer and audiovisual equipment, allowing the instructor to teach using a wide variety of media. These include DVD and VHS playback, Power Point presentations, and more all displayed through a data projector. Some smart classrooms have a semi-permanent unit in the room called a Smart Console. These Smart Consoles have similar equipment housed inside them as the other smart classrooms.

Smart Teaching and Learning inside the Classroom

Worldwide there has been a strong push to get educational technology into the hands of teachers and students – yet it remains a really that most teachers a really that most teachers across the world continue to struggle with their day to day challenges in classrooms and remain completely un-impacted by technology even today.

The primary means for this is that most technology integration initiative developed for schools ignores to look at the specific pain areas and real life challenges that teachers experience in classrooms.

Not only should the solution address the pain areas of the teacher but also follow a path which blends seamlessly with their own individual traditional teaching styles. There is a need to provide them with digital content that is mapped precisely to curriculum. The method also needs

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Dr. M. Lekeshmanaswamy, Ph.D. and Dr. K. Dhanalakshmi, Ph.D.   232

to be simple, minimally invasive, user friendly and have minimal dependence on teachers own skills. Equally essential is on going handholding support from training to maintenance.

Smart Class was launched by Educomp on a limited pilot basis early 2004. In the initial stages a soft launch across a few select geographies confirmed that the promised value proposition and the model of delivery offered by smart class had phenomenal acceptance amongst private schools of all categories.

Smart Class was conceived and developed around the ideology that for technology to become an integral part of day to day teaching and learning practices in schools, it needs to move right in to the classroom where students and teachers spend over 80% of their teaching learning time.

Among the Indian private schools some of the most reputed schools in India such as the DPS R. K. Puram, Bal Bharati School, Pitampura in Delhi and Padma Seshadri Group of schools in Chennai were amongst the first to adopt the programme. Smart class has now been adopted by a good number of schools across India and is at the threshold of bringing in a rapid transformation of moving technology into classrooms in private schools in India.

Smart Class Programme Overview

Smart class is powered by a vast repository of "instructor led" digital presentation materials such as animations/video clips, etc. which are mapped to curriculum guidelines adopted by the school. The content modules are made available to the teacher's right inside the classroom as and when they need them as per their own pre specified time tables. A powerful application engine enables teachers to search/select/vie/prepare lesson plans and use the content modules in class.

A knowledge center is set up inside the school campus equipped with a server connected to all classrooms. The classrooms are equipped with PCs for the teacher and a display mechanism to broadcast instruction materials for a group of students in class.

Students acquire a greater understanding of the concepts taught in the class through engaging visuals and digital presentation materials used by the teacher. There is a deeper internalizing of abstract concepts that results in better recall and therefore directly impacting student's academic grades.

Delivery Model

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The entire programme is delivered to schools by Educomp on a turn key basis. The programme deliverables involve all elements such as the repository of mapped digital content resources, training for teachers, provision, installation and maintenance of all supporting infrastructure such as hardware software, accessories, networking besides full time in campus manpower to provide day to day hand holding support to teachers.

The programme is made affordable for all private schools in India by helping schools to align all investments made for the program to a nominal subscription fees collected from students over a five year term.

Smart Board

The smart Board (stylized as "SMART Board") is a line of interactive whiteboards produced by the Calgary, Alberta-based company Smart Technologies.

Technology

The Smart Board is an interactive whiteboard that uses touch detection for user input – e.g. scrolling, right mouse – click – in the same way normal PC input devices, such as a mouse or keyboard defect input. A projector is used to display a computer's video output on the interactive whiteboard, which then acts as a large touch screen. The Smart Board interactive whiteboard typically comes with four pens, which use digital ink and replace traditional whiteboard markers. Most Smart Board interactive whiteboards register only one touch at a time. However, in June 2009, Smart Technologies introduced their first dual – touch interactive whiteboard. The dual – touch Smart Board interactive whiteboard accepts two simultaneous touches; however, the touches only register on two separate sides of the interactive whiteboard surface.

DVIT

The Smart Board interactive whiteboard uses DVIT technology to detect and respond to touch interactions on the interactive whiteboard surface. This camera- based touch technology for interactive whiteboards and interactive displays uses digital cameras and proprietary software and firmware to detect finger or pen contact with the screen. That contact is then interpreted as finger or pen activity. Smart has been using DVIT technology in its interactive whiteboards since they developed the technology in 2003 and has continued to use DVIT in many products since, including Smart Board interactive whiteboards, Smart Board interactive displays and the Smart Table interactive learning center.

Digital Ink

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Smart's digital ink operates by using an active digitizer that controls the PC input for writing capabilities such as drawing or handwriting. The Smart Board interactive whiteboard uses passive pen tools, which means that no technology is housed in the pen tool to use digital ink or determine color. All digital ink options can be selected from the Smart Board Pen Tray.

Smart Board Pen Tray

Most models of Smart Board include a pen tray on the front of the interactive white board that holds two to four plastic pen tools and an eraser. The pen tools have neither electronic components nor ink – the technology is in the pen tray. When a pen tool is removed from its slot in the tray, an optical sensor recognizes its absence. Smart Board software processes the next contact with the interactive whiteboard surface as a pen action from the pen tool that resides in the corresponding slot. Older models of the Smart Board interactive whiteboard features slots for black, blue, red and green pen tools, although a control panel can be used to change the color of the digital ink or change the pen tools to colored highlighters.

Resistive Technology

The earlier Smart Board 600 series interactive whiteboards use resistive technology. A flexible plastic front sheet and hard backboard are coated with a thin resistive film. The resistive sides of each are separated by an air gap of two – thousandths of an inch, or about the width of two human hairs. Pressure applied to the surface of the front sheet closes the gap and is registered as a contact point. This contact point is then converted from an analog signal to a serial data stream which is sent to a computer for further processing. This technology can process contact from a finger, pen tool or any device – such as a pointers.

Bundled Software

The Smart Notebook program is included with the Smart Board and all other Smart products, which allows its user to compile notes, images, and other media into virtual notebooks which can be projected and edited using the Smart Board itself. Other Smart software products are designed for use with and can integrate with the Smart Board for other tasks.

Classroom Use

The interactive nature of the Smart Board provides many practical uses for the classroom. Using Smart Notebook software, teachers can record each step of a lesson activity for students to review at a later time.

1. The Smart Board allows users to work with large amounts of information,

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2. It offers an information space that invites active collaboration
3. The work produced is often "dynamic and contingent"

Users have the opportunity to engage with the technology by direct manipulation. Moreover, this space allows for more than one user; essentially, it invites multiple users.

Applications

The Smart Board interactive whiteboard works with any program loaded or available on the host computer. Some applications commonly used with the Smart Board are Microsoft PowerPoint, Excel, Word, and AutoCAD.

Uses for the Smart Board include teaching, training, conducting meetings, and delivering presentations. It has also been used on the Discovery Channel television show MythBusters.

How Are Smart Boards Used in the Classroom?

In modern classrooms, the Smart Board is becoming as regular a feature as desks. Smart Boards meld high-tech functionality and tradition by acting as a computer monitor and a chalkboard at the same time. In our wired society, we can now show videos, write equations and check homework all on the same board in the classroom. Smart Boards represent an exciting technological step forward for presenters and teachers.

Operation

Smart Boards are touch-sensitive input devices, Via a series of cables connecting the classroom projector, the source computer and the Smart Board, the board functions as sort of outboard mouse and monitor, allowing the user to "manipulate" the information that is being displayed via the board's touch surface. The information displayed by the source computer is projected onto the front of the board.

Slide Shows

One function of the Smart Board is as a slide advance. Slide show presentations, such as the kind created using PowerPoint, can be projected onto Smart Boards. Presentations that do not require timing can be advanced by a tap on the board's surface; specific regions of the board are designated as slide advance/reverse to allow the presenter use of the included markers without changing the displayed slide. The advantage of using the Smart Board is that the presenter is not tied to the source computer, allowing movement during the presentation.

Digital Blackboards

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Smart Boards can function as dry-erase boards through the use of Smart Board pens. The pens come in standard colors and allow the presenter to make digital marks on either the subject being displayed or a new, white "page". The "ink" can also be erased with an included digital eraser that deletes the marks but does not affect the subject underneath.

Peer Review

Especially in computer labs, but also in classrooms, students' work can be displayed on the Smart Board. Traditional homework can be scanned into the source computer, and digital work may be uploaded or transported via portable storage devices or network/Internet transport. Using the Smart Board to display assignments allows everyone in the room to see examples of good work or trouble areas, and corrections and suggestions can be made in class.

Additional Suggested Uses

Classroom uses of the Smart Board are only limited by the instructor's imagination; there are multiple artistic possibilities for the smart board, including silhouettes and tracing. Students may use the multimedia capabilities of the board to present videos or musical pieces, and the instructor can use the board to provide materials for students who may have forgotten to bring assigned reading pieces.

Maintenance

Keep dry-erase markers far away from the Smart Board; many presenters have made the mistake of grabbing an ink marker and writing on the board's surface. If stray ink marks are made on the board, they are difficult to clean and require the attention of a technician.

Make sure that your Smart Board is calibrated. If a Smart Board is not calibrated, it is not capable of accurately representing input. If you put your finger or marker on one spot, the board might display input at another location. Calibration software is including with the board. If you are not comfortable calibrating the board yourself, contact technical support.

Special Considerations

Since the image is projected onto the Smart Board from the computer, presenters should be sure that there is nothing visible on the monitor of the source computer that the audience should not see. Web sites should be opened and checked for pop-ups and inappropriate content prior to commencing the presentation. If necessary, they can be saved for offline access, saving the presenter from possible embarrassment if the site cannot be found, or the Internet connection goes down. The presenter should also consider that since the presentation is being projected, a

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clear line of sight from the projector to be board should be maintained to make sure all audience members can see the presentation.

Conclusion

The use of emerging technology of smart class teaching is very important both for teachers and students. Its overall effectiveness needs to be enhanced by better planning and implementing of soft skills of multiple intelligences. More research is needed to discover and the way of using emerging technology of smart class teaching for secondary school teachers. The rate at which multiple intelligences will be used to enhance education in smart class and in other fields depends mainly upon state and national monetary commitment, followed by the willingness of individual schools to provide goods and services. This technological approach of emerging technology of smart class teaching for secondary school teachers will fulfill the gaps in students' knowledge, understanding, and application.

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Sources Used

1. Catherine Eberbach; Kevin Crowley; Review of educational Research, vol.79, No.1, pp 39-68.
2. Proceeding of 3rd National Teachers Science Congress, 27 – 30, January 2006, Mysore.
3. www.rer.aera.net.
4. Proceeding of 5th National Teachers Science Congress; 1 – 4th, Oct 2009, RIE, Bhubaneswar.
5. Biswal B. N. Proceedings of 96th Indian Science Congress; NEHU, 3 – 7th Jan – 2009, Shilong.
6. P, Gagan, Current Science, vol.96, No,10, 2009
7. Mohapatra, M; Mohapatra JK; Indian educational Review, vol.44, No.2, 2008.
8. National curriculum frame work – 2005, NCERT, New Delhi 2005.
9. B. N. Biswal, Edu tracks, vol.7, No.2, pp 22 – 23 2003
10. www.iss.ac.cn/iss/conferences
11. Vigyan Prasar annual report, 2006 – 07.
12. Education world vol.xi No.7 2009.
13. Information and Communication Technology & Communicative English, Dr. K. Sivarajan, K. P. Baby Suman Aboo backer; K. Shanavasm Nov 2006, Primier offset, printer, Calicut.
14. http://www.digitallearning.in/articles/articledetails.asp?articleid=1621&typ=CORPORA

Language in India www.languageinindia.com
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15. http://www.ehow.com/about_5101358_smart-boards-used-classroom.html
16. http://www.monroece.edu/depts/instech/smartclass.htm
17. http://www.digitalclassroom.in/
18. http://smarttech.com/classroomsuite

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