Role of New Technology in making learning effective and efficient: An Analytical Study

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ABSTRACT

Information technology has affected each and every sphere of human life. In fact it has a very important role in the domain of education, especially in case of distance education. It helps in transforming it into innovative forms of experience. The need for new technologies for the process of learning and teaching grows faster and stronger. The information era becomes the era for providing knowledge and unmatched and sound feasibility for exchanging information, for discovery, exploration and communication for strengthening the process of learning and teaching. Information technology helps in the promotion of opportunities related to sharing of knowledge across the globe. They help the instructors as well as the students in having updated information as well as knowledge. Right and accurate information is important for efficient learning and teaching. Information technologies maybe defined as tools which help in providing right users with right information at right time. The students are completely independent and they are able to take the right decisions about their education, place as well as resources.

Keywords: distance learning, information technology, ICT tools, ICT for education.

INTRODUCTION:

The role that technology plays in a traditional school setup is to mainly facilitate through increased effectiveness, efficiency, education of skills and knowledge. Efficiency can be defined as quickness through which people gain knowledge. While effectiveness is related to amount of the imparted knowledge which is mastered operationally. When technology applies directly to the educational setup, like school, the teachers and the students may be considered to be learners. Therefore, we may work under an assumption that an increase in the knowledge of teachers and use of this knowledge has a huge impact of enhanced learner's knowledge amongst the students. Ultimately, technology needs to work towards increasing the achievement of students in schools. Technology may help in educational achievements through mainly 2 methods: removal of the physical barriers for learning and transition of the focus from retention of learner's knowledge to the utilisation. Each of the methods is examined in context of the relation they have with the instructors and students for seeing their effect and value in the educational setup. The eradication of the physical barriers helps the teachers in getting a better accessibility in terms of their professional development. Before the advent of internet, and distance learning, engagement with the learning community, like networking at workplace or school needs close physical proximity amongst the members of the community. At present, there are various examples of usage of distributed learning technologies in the field of education. Firstly, a lot of educational institutions have started transitioning into the programs which allow distance education. It is no longer a necessity that the teachers should be located in close proximity with the students for pursuing their education. The trend towards distance learning and online classes as well as educational opportunities have become quite prevalent. So much so that there are a number of organisational institutions that comprise of just online classes which help the teachers in completing the complete course through distance education programs. Secondly, the usage of distance learning programs is not restricted to setting of a

university or a school. It is also found at the site of the school, district as well as state in terms of professional development for the teachers with an emergence of seminars and web-based events (Gilakjani, 2017).

Also, the internet based technologies allow the teachers and instructors to form communities of learning which confined just too local school sites aren't. For instance, the science instructors could use content delivery systems or wiki for networking and sharing information with the teachers at the other schools within as well as beyond the local school districts (Gilakjani, and Sabouri, 2017).

LITERATURE REVIEW:

Looking at the history of dissemination and storage of information indicate that humans use different types of things for storage of information, its transmission as well as display. In different periods, humans used different types of methods as well as material for communication like stones, rocks, palm leaves, etc. in order to store and transmit information and data. The means of data and information were confined to elites. However, with the advent of paper and printing, information started being spread across the globe for moving to an equitable level of knowledge. Currently, knowledge could be considered to be powerful. Also, knowledge comes mainly from information. Information encompasses as well as depends on use of varied channels of communication and technologies of communication known as information technology for an equal access and effectiveness (Herro, Quigley and Jacques, 2018). Information technologies could help in extending knowledge even beyond geographical locations of the country or the state providing relevant information which may be available to people 24*7. Information technology can be defined as the computer aided tool which people use for working with info and for supporting information and needs of information processing of the organisation. It includes use of computers and the related technologies, internet, etc. Information technology could be used for promoting the opportunities related to dissemination of knowledge. It may help students and the teachers having updated knowledge and information. Right and accurate information is important for efficient learning and teaching along with information technology. It is a set of technological tools which may help in providing people with required information at right time (Beach, 2018).

In this regard, information technology could be the result of an explosion of knowledge where computer technology helps in extending the psychological ability of an individual. Thus, information technologies could include computers and the related technologies of low touch and high tech nature. Researchers call them as emerging technologies and state that they are products which come from labs and into hands of the educational community. They include wireless communication, information highway, integrated services network, asynchronous mode, impersonal virtual assistances, multimedia applications, virtual reality as well as artificial intelligence. Such technologies are small in mass, big in brain and depend mainly on computer technologies for their efficiency as well as improved capabilities (Blikstad-Balas and Davies, 2017). Similarly, some researchers suggest that CD-ROM, interactive videos, internet, compact discs, satellites, teleconferencing, mails are emerging as information technologies and they are also being incorporated into environment of teaching and learning.

There are a number of factors which challenge the teachers because of rapid expansion of the domain of knowledge. The modern day technologies demand that the teachers should learn the right way of using the technologies for their teaching methods. That is why the new technologies boost the training needs of teachers. Some researchers have also asserted that the attitude of teachers towards the use of computers is important for successful implementation of the ICT tools for education. They have also pointed that the teachers don't have a positive attitude towards computer education. Also, their poor attitude may cause failure of projects that are based on computer technologies. Some of the most common barriers in this regard are: insufficient time, improper access, insufficient resources, insufficient expertise as well as a lack of proper support. Another barrier that has been given by some researchers include reliability and credibility. Reliability include failure of hardware, incompatible software in school and home, slow or poor connectivity of internet and obsolete software that are moistly available at schools while educators and students have more updated software at their homes (Yarbro et. al., 2016).

Something's most important here is the process of education and the way students learn. The applications of learning and teaching strategies emphasise the activeness of learners in process which helps the students in using their abilities for conducting different activities. The teachers should have the capability of creating conducive conditions for them to become more active according to their level of awareness and abilities. This shows how effective learning system is imposed for creation of optimum student education activities (Park and Park, 2018). The efficiency of teaching could be considered from stated goals. Education should be systematic in terms of development, planning, evaluation, improvement stages and evaluation, sensitive with the needs of task and needs

of learning. The goal should be absolutely clear for having an effort for achieving it. It should start from their strength or ability of people concerned including the society, educator's students and government. For supporting efficient learning process, the education related technology is important because practically educational technology contributes in a big way towards modern learning related to principles which underlie the educational technology for the process of learning (Shively and Palilonis, 2018).

There are 5 main educational technologies for obtaining behaviour, outcomes of student learning which are characterised through changes in the behaviour as the process of learning. This process occurs due to impulse and the goals need to be attained. From above description, in efficient learning of education technology, learning tools or media tools have good values for the students and the teachers as they are very effective for achieving the desired competencies (DeSantis et. al., 2017). The learning tools or media tools including laptops, television, radio, internet, etc. are modern and simple. These tools are helpful for efficiency of the process of learning. Education based technology and learning are efficient when the instructor applies students centric model of learning. In the concept or education technology, the role of media tools isn't just for communicating the relation between source and recipient, but a lot more than the integral part. It has an interrelationship with the components of another, mutually interact as well as influence one another.

The definition of education technology as per AECT is study and ethical standards of practice for facilitating learning and improving the performance. It is done through creation, use and management of appropriate technological process and resources. Appropriate technology for learning should be passed on the basis of the potential for meeting the educational goals. The primary potential of the educational technologies is to support creativity as well as critical thinking. For understanding the process of evaluating the feasibility of this technology, it's very important to first identify the purpose for education, what the educational technology all about and the way application of the appropriate education technology happens (Yordming, 2017).

The main criteria for assessment of suitability of education technology significantly in terms of higher education for developing nations include:

1. Independence of system. It mainly relates to ability of the technological devices for standing alone, for performing their roles and responsibilities with very less or no facilities and supportive devices which help with their functions.
2. Image of the modern day technology. Human's nature has a desire of feeling important and it's perceived to be valuable. Thus, successful technology also brings the users for meeting the needs but even to feel some extent of sophistication that helps in improving the social status.
3. Individual technology as compared to collective technology. Related to cultural or social standards wherein the proposed technologies would operate.
4. Cost for technology. The cost for device should be so that people are able to afford it.
5. Risk factors. Development of the new technologies offer the possibilities of success and failure. There are mainly two types of risks which need to be considered i.e. internal or external risks. The internal risks are related to way technology works according to local system of production. The external stores relate to support of system which is required for supporting functioning of technology. Such risks should be considered during or before the development of the technological tools.
6. The evolutionary technology capacity. As and when possible, its considered that technology possesses certain design characteristics which permit continues development
7. Single purpose or multipurpose technology. The technological devices have some objectives which may prove to be useful for people who are not able to afford them on an individual basis (Finn, 2016).

Additionally, economic benefits of the approach even help in reducing the technical skills and knowledge which are required for maintaining the functioning of devices. Thus, wherever possible, appropriate technology should be developed which may be used by different applications. Right technologies might not be there. Such criteria aren't complete. All the current technologies don't need to be blindly used. The learners should conduct an evaluation. It maybe done through the technologies available. Not all the technologies or internets have to be followed. For instance, the multimedia tools which exceed the interactive multimedia tools don't mean that they need to be used for learning. Something which needs to be considered is need as well as learning environment. The evaluation of the learning technologies like multimedia should be conducted for further researching for the application of the same in learning. One of the best approaches to build the right technology is balancing the criteria with requirements (Flewitt, Messer and Kucirkova, 2015).

CONCLUSION:

As per the current status and usage for educational goals, technological advancements are fulfilling the ever challenging role in terms of traditional education domain and other domain also. Within the domain of education, technology is seen as the means for removing the barriers for teachers and students. Firstly, technology is capable of removing the geographical and financial barrier with the help of distributed learning. It helps the students and the teachers in experiencing educational opportunities which might have not be able to ever encounter. Secondly, technology brings focus on the issues and skills based learning system also.

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