

Impact of ICT on student and Teaching Process

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ABSTRACT

Information and communication technologies (ICT) have become a part in all aspects of life. Imparting education is a socially oriented activity and knowledge sharing has traditionally been associated with teacher – centric learning .The use of ICT in education has changes the traditional approach itself to student-centric learning s. In this paper, a literature review regarding the use of ICTs in education is provided along with ICT and students’ performance, ICT enhancing teaching process and ICT beyond curriculum.

Keywords

ICT,performance,Curriculum,Technology

Introduction

During the last few years higher education institutions have invested heavily in information and communication technologies (ICT). Information communication technology has played a lead role in universities framing curriculum, for decision making in a organization and also in teaching process and learning methods.

The important factor is that the impact of technologies on student achievement and their return on education is difficult to measure. There is no universal method for evaluating student’s performance. The universal standard approach to measure their achievement is to measure how students learn the course and obtain their respective degree or their marks. The outcomes of education are mainly recognized in the job market.

ICT and students’ performance

Kulik’s (1994) meta-analysis study revealed that, on average, the students who have used ICT-based instruction scored better than students who have not used computers. The effective time taken for

studying a topic was less. The students liked the class when class is taken using ICT Technologies.

In the study conducted by Sosin et al.(2004) from sixty seven sections students learning basic economics, enrolling three thousand nine hundred and eighty six students, taught by thirty instructors in fifteen institutions in the United States of America in 2002 it was found out that there existed a positive effect on student performance due to ICT use.

Attwell and Battle (1999) examined the relationship between those students who had Personnel Computer in home and their performance in studies for a sample of around sixty four thousand and three hundred students in the United States. The result report that those students who had personnel computer in home scored better that those who did not have especially in maths and reading.

Coates et al. (2004) showed that students in on-campus courses usually score better than their online counterparts, but this difference is not significant here.

Li et al.(2003) brought out the following featured. Web based instruction method presents contents in a non-linear style, allowing students to explore various new information or content through googling it out. Web based teaching supports active learning processes gave more importance to constructivist theory. Web based education has brought about enhanced understanding through better visualization and real time animated videos. The web based teaching method also gives the convenience that it can be viewed any number of time and without time restrictions.

ICT enhancing teaching process

In the traditional approach of teaching content was given more importance. Teachers and students depended on written material and textbooks. Teachers have taught through active lectures and presentations along with tutorials and learning activities such as role plays , drama , designed to give a better understanding of the content. Modern teaching setup in focusing on capabilities of how the information taught can be used. Contemporary ICTs provide his backbone and there are now many good examples of world class settings for competency and performance -based curricula that make sound use of the affordances of these technologies (Oliver, 2000).

The integration of ICT into the teaching pedagogy have helped the students to better understanding and in developing the quality of education by providing assistance in subjects which was considered difficult to understand. To achieve these objectives, teachers need to be a part of the design phase, development phase and implementation phase.

According to Zhao and Cziko (2001) 3 characteristics or feature are necessary for a teachers to bring ICT system into their classrooms. They are: teacher should believe in the effectiveness of technology, teachers should believe that there will not be any problem or hindrance due

to the use of ICT technology, and finally teachers should strongly understand that they get a better control of technology.

It is inferred from the earlier studies that majority of the teaching community have not used the benefits of ICT to make an impact to the quality of teaching process or the learning atmosphere, although they know the usefulness of this significantly (Smeets, 2005). Harris (2002) conducted a study in each 3 primary and secondary schools, with the objective to find the best pedagogical practices involving ICT is taken. The study gave the result that the benefit of ICT will be got to the students only if the teacher is willing to bring about changes in the traditional teaching method followed in class. As a consequence, the use of ICT will improve the learning process and environment and also make the future citizens equip with good career (Wheeler, 2001).

Newly trained teachers (trained on latest technological tool) will come with varied responsibilities and skill sets (Littlejohn et al., 2002)

Eye beyond the curriculum: Student motivation, new skills

ICT has been shown effect beyond the student's knowledge of traditional school subjects. A number of studies have established that usage of computers can have a positive effect on student motivation, such as their attitudes toward technology, instruction, or the subject matter. For example, the Kulik analysis found that students using computer tutorials also had significantly more positive attitudes toward instruction and the subject matter than did students receiving instruction without computers.

This finding corresponds to that in a comparative study conducted in physics classes in Kenya, where two randomly assigned classes used computer-based instruction, while a third equivalent group did not.

BASIC EFFECTS OF ICT ON TEACHING PROCESS

- Has an effect in terms of quality of student work and practical examples through visualisation;
- Equalises individual differences and has particularly dramatic effects for students with special needs;
- Facilitates self-pacing with increased capacities to deal with individual learning styles as students can work at the pace and intensity suitable to their needs;
- Enables collaborative learning with little indication of the isolated learner;
- Encourages use of peer coaching and peer reviews;
- Develops communication skills and awareness of different audiences;
- Has impact on resource-based learning and access to real world information through the Web;
- Increases information reliability and accuracy adding to authenticity of learning tasks, with realistic and up-to-date information;
- Increases student motivation through hands-on activity, visual representations and improved modes of presentation;
- Encourages independent learning and individual preferences for process, layout, style and format;
- Allows students to produce high quality multimedia products;
- Changes teacher practices, planning tools and assessment rubrics;
- Increases opportunities for classes to evolve and for student experiences to shape outcomes;
- Has motivated students to commit to learn and to participate in learning activities;
- Has improved students' quality of work and has given them the confidence to perform enhanced learning tasks;
- Has allowed students to learn independently

Students in the computer sections learned physics concepts better and expressed positive attitudes about their physics learning, as ascertained in interviews at the end of the lessons. Students also learn new skills that go beyond traditional school knowledge.

Various latest technology claims for the adoption of a more sophisticated set of “21st Century skills” in the curriculum for the social and economic development. They claim that the use of ICT can support the learning of such skills as technology literacy, information management, and communication, working in teams, entrepreneurialism, global awareness, civic engagement, problem solving and many more

CONCLUSION

The integration and use of information communication technologies in the area of education have a positive impact on teaching, learning, and research. ICT has affected positively to make student understand the context better and enabled a wider access. In addition, it has increased flexibility so that learners can access the education irrespective of time and geographical barriers. It has also

influenced the teaching learning process. These possibilities can have an impact on student performance and achievement.

Due to easy access of best course material in education, which can be shared by means of ICT, has fostered better teaching process and improved academic achievement of students. The overall literature suggests ICT integration in education has been a successful project.

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