A STUDY ON IMPACT OF ICT ON EDUCATIO AND TEACHING-LEARING PROCESS

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ABSTRCT

Information and communication technology (ICT) is one of the important part in the present education system. For academic performance and in daily curriculum every teacher and student must have knowledge of technology. The aim of ICT is to make advancement in the development education among young youths. With the changing environment and industrial demand the scenario is more visible now days. The ICT education is common everywhere especially in the educational institutions. For the development of quality education among student at every level of education ICT plays a great role. ICT is used in educational institutions as an aid to teach students. It means that E-learning has gained popularity among students as well as teachers. In most of the educational institutions teachers mostly prefer to teach student by using various technologies. The aim of the paper was to study the impact of ICT on education especially in teaching- learning process of students at higher secondary level in Jammu and Kashmir. The present study was descriptive in nature. Self-constructed questionnaire was developed for primary sources of data and some research papers and dissertations were also reviewed for secondary sources of data. Percentage statistics was used for primary data analysis. The finding of the study revealed that ICT is an integral part of education system and almost all the students are aware about the technology for the better performance and teachers have great knowledge of ICT and using the various sources of technology in their teaching –learning process. ICT helps the teachers to develop sound pedagogy and curriculum to meet the individual needs of the student in a better way.
KEY WORDS: Education, ICT, Higher Secondary Level, Jammu and Kashmir, Teaching-Learning Process

INTRODUCTION

The most important driving forces promoting economic growth in the country is only with help of information and communication technology. The ICT has played a critical role in all fields of human life. ICT is defined as computer based tools that includes both hardware and soft ware components. It is used differently in different school subjects and tends to expand access to education ICT education can any occur anywhere any time like teleconferencing, online classes both learner and teacher interact simultaneously. Based on ICT, multiple knowledge can be acquired through video clips, audio sounds, and visual presentation and so on. Learning and teaching no longer depend exclusively on printed materials. The present

research has revealed that ICT assists in transforming a teaching environment into a learner-centered (Sanchez, C. & Aleman 2011). The number various major policies have supported the introduction of ICT in education that helps us to change the present system education in the society. Fortunately, some countries have made ca better progress in bringing networked ICT into education and made it very possible for teachers and learners to use of it into a daily basis. The use of computer and Internet technology came into new forms in the field of education like share or transmits, exchange information, and data creation. etc., and then ICT consist of the software, hardware and media for storage, collection, processing, presentation of information, transmission and related services (Karoline & Celine, 2016). ICT as the form of technology that are used to transmit, pro create, create process, display, and share or exchange information by electronic means (UNESCO 2010). In many other cases, However, in other cases implementation policies have not been a gone through systematic analysis and reflection. As a consequence, we have still a little knowledge about the impact and effectiveness of ICT in education and human life.. To fill the gap, this research paper has examined both positive and negative impact of ICT on education especially in teaching-learning process.

POSITIVE IMPACT OF ICT

1. ICT accessing and assists students in digital information efficiently and effectively.
2. It supports self-directed learning and learner centered.
3. It produces a creative learning environment for both teacher as well as student.
4. It promotes collaborative and friendly learning in a distance-learning environment.
5. It provides opportunities to develop critical thinking skills.
6. It helps to improve access, quality, and efficiency in the school system.
7. To improve teaching and learning quality ICT has great impact to enhance qualitative learning environment.

NEGATIVE IMPACT OF ICT

1. Lack of appropriate goals for ICT in school system and low expectations of teacher.
2. Lack of experiences and less pedagogical support for implementing ICT in the education system.
3. Lack of time for providing appropriate knowledge of ICT and its implications
4. Insufficient knowledge and skills for managing the hardware and software in teaching contexts.
5. Technical problems and classroom management with large size of class with students.
6. Lack of funds for better implementing of ICT education among students.
7. Lack of trained and experts in technology directly effects on the ICT education in the schools.

REVIEW OF THE RELATED LITERATURE

The review of related literature is an overview of concepts and developments to a research problem. It brings the researcher to work up-to-date that have done by others. It makes a significant contribution to each operational step at a later stage. The knowledge of literature review helps the researcher to broaden his/her understanding of the research problem. A good literature review does not just summarize sources, but it aims to examine, interpret and evaluate the literature. Minikutty & Sandhya, 2015, studied that in the streams of science & humanities, ICT literacy is 0.773, which is not significant at 0.05 levels and ICT literacy had significant difference with value 2.58 at 0.01 levels in the case of gender. Shrivastav & Garg, 2015, revealed that after the commencement of ICT subject in unaided secondary schools the students became better at self-regulation. Kumari & D'Souza, 2016, mentioned in the study that ICT is used in secondary schools by teachers is average in both rural and urban secondary school teachers without significant difference. Biswas, 2017, explored in the study that secondary school teachers had the same attitude towards ICT, type of school management and gender were not barriers to that. Sang et al. 2010, indicated that pre-service teachers have stronger intentions to integrate technology in the future teacher practices especially those who have highly constructive teaching beliefs. Yildirim, 2007, stated that schools need to provide better access to technology, schools and related institutional systems should employ new policies and strategies to involve teachers in the decision-making process and good planning regarding ICT in their classrooms. Whelan, 2008 also mentioned in the study that more barriers from the student perspective, like inappropriate technical skills that reduce access to ICT in classroom; an insufficient number of academic advisors and experts, lack of timely feedback from instructors, reduced interaction between peers and instructors. Trucano, 2005 reviewed that a series of studies on ICT's impact on schools found that the impact of ICT use on learning outcomes is unclear. However, Cox & Marshall, 2007 found o that ICT indicators and studies do not demonstrate solid effects. Chitnis, R. 2017, examined that the availability and usage of ICT is very important to improve the educational efficiency of students. It indicates that availability of ICT in Education is very supportive and also to improve learning skills among students as well as latest technologies of ICT are helpful to prepare better assignments and projects for the students. Somekh B. 2007 the study indicated that ICT is effective and innovative for creating employment opportunities in changing the higher education culture. Asian Development Bank, 2009**,**the report found that ICT has become accessible, interactive and affordable with better outcome that also have a potential for transmitting the quality and relevance of secondary, and higher secondary education. Chaib and Svensson 2005 revealed that Integrating ICT means to make optimum use of new technology in pedagogically significant and economically feasible. Jesson& Peacock, 2012 stated that use of ICT in the classroom with an interactive whiteboard connected to computer and projector that help teachers to make use and to create presentation in organized way. The study also mentioned that the teaching can become more dynamic, effective and enjoyable

when audio and visual aids on screen can be applied for both learners and teachers in a classroom. Dimitrios &et.al. 2013, the study found that the methods of modern teaching, strategies and tools that adopt and integrate Information and Communication Technologies in the classroom helps in individual learning. Instead of individual differences to be taken into consideration when student-teacher interaction needs to be encouraged in all cases for the learning process that shall be effective and interesting and will also broaden their knowledge, and develop competencies and skills to make it more competitive in the market place so as to meet industry demands for, creative and productive and well trained employees.

METHODOLOGY

Objectives of the study

1.   To study the perspectives of teachers towards ICT education.
2.   To study the perspectives of students towards ICT education.

The present study was descriptive in nature. The population consisted of 100 Govt. higher secondary schools from both Jammu and Kashmir division. The sample constituted of 200 teachers and 200 students from these sampled schools. In the present study self-constructed questionnaires for teachers and students were developed to know the perspectives of students and teachers towards ICT in teaching-learning process. The investigator personally visited to all these higher secondary schools after getting permission from the school heads. Before distributing the questionnaires among teachers and students the researcher made the purpose of the data collection clear and gave some directions for filling the questionnaire. The investigator also made aware that the data collected from teachers and students will be highly confidential and should be used for research purpose only. After data collection the investigator analyzed and interpreted the data through the statistical technique i.e. percentage statistics.

ANALYSIS AND INTERPRETATION OF THE DATA

Objective no. 1: To study the perspectives of teachers towards ICT education.

Table 1: Showing perspectives of teachers towards ICT education.

Teacher perspectives	Number		Percentage	
	Yes	No	Yes	No
Good knowledge of ICT	160	40	80%	20%
Appropriate use of technology in classrooms	140	60	70%	30%
Sufficient no. of ICT tools available in the school	120	80	60%	40%
Well trained in ICT.	130	70	65%	35%

Training received for improving skills of ICT.	110	90	55%	45%
Good amount of funds for implementing	90	110	45%	55%
ICT education in schools.	100	100	50%	50%

Table 1 shows the perspectives of teachers towards ICT education in schools. The table depicts that 80% teachers revealed that we have good knowledge of ICT and provides same to the students, 70% teachers said that in schools we have appropriate use technology in education; only 60% teachers revealed that we have no. of ICT tools available in the higher secondary schools. The table further indicated that only 65% teachers are well trained in ICT and 55% teachers were given special training for ICT education whereas; only 45% revealed that the good funds are available in shools for ICT education. Hence 50% teachers responded that ICT is one of the compulsory subjects teaching in schools. Therefore it indicated that ICT education is given to the students by teachers but in few schools.

Objective no.2: To study the perspectives of students towards ICT education.

Table 2: Showing the perspectives of students towards ICT education.

Student perspectives	Number		Percentage	
	Yes	N0	Yes	No
ICT helps Individual Learning	170	30	85%	15%
Daily use of ICT in classrooms	130	70	65%	35%
Good instructor of ICT available in Schools	121	79	60.5%	39.5%
ICT should Compulsory for each students	130	70	65%	35
ICT creates interest among students in education	175	25	87.5%	12.5%

Table 2 shows the perspectives of students ICT education in schools. The table reveals that 85% students said that ICT helps use to develop individual learning environment and 65% students responded that we have daily use of ICT education in the classrooms. The table further indicated that only 60.5% students said that good instructor for ICT education is available in schools and 65% students revealed that ICT should be compulsory subject for each students in the school whereas, 87.5% students perceived that ICT creates interests among students in teaching –learning process. Hence it indicated that ICT education has positive impact on the education system.

DISCUSSION OF THE RESULTS

ICT plays an essential role in the life and education of the students. It creates collaborative and friendly environment in the teaching-learning process. If education is life for an individual being ICT is the integral part of the education system because in the modern era everyone is depend on technologies and take benefits of it for day to day lives. After analysis and interpretation the results of the study discussed here, the study revealed that ICT is an important part of the higher secondary schools of Jammu and Kashmir because it creates interest among students for individual learning the study is in line with the study conducted by Chitnis, R. 2017, the study found that teachers have better knowledge of ICT and make appropriate use of it in the classrooms the study is in the contradictory with the study conducted by the Cox & Marshall, 2007 and Trucano, 2005. The study further indicated that teachers are well trained in ICT and received special training for it the study is in the line with the study conducted by Sang et al. 2010. The study found that there is lack of funds for ICT education providing in higher secondary schools of Jammu and Kashmir the study is in the line with the study conducted by Yildirim, 2007.

FINDINGS OR RESULTS OF THE STUDY
Primary sources of findings of the study
1.   The study revealed that almost all the teachers have good knowledge of ICT and providing same to the students in the class room. There is lack of funds in higher secondary schools of Jammu and Kashmir for better implement of ICT education in schools. The study examined that most of the higher secondary schools students want ICT as one of the compulsory subject in schools. It has been explored from the study that 85% students said that ICT helps use to develop individual learning environment and 65% students revealed that we have daily use of ICT education in the classrooms. It has been found from the study that 60% teachers perceived that we have no. of ICT tools available in the higher secondary schools and only 65% teachers are well trained in ICT and special training for ICT education was given to only 55% teachers.

Secondary sources of findings of the study
2.   The study revealed that educations must employ new policies and programmes to involve teachers in the decision-making process and good planning regarding ICT in their classrooms for better learning. It has been that secondary school teachers have same attitude towards ICT and there is no effect of gender on ICT education. The study explored that maximum use of new technology helps to make use of sound pedagogy effectively. Finally the result revealed that ICT helps us in creating employment opportunities in changing the higher education culture and better learning outcomes.

RECOMMENDATIONS

The present study was focused on the impact of ICT education in teaching learning process among higher secondary school students of Jammu and Kashmir. On the basis of findings of the results the investigator suggested these recommendations; the students of higher secondary schools must aware the basic knowledge of ICT and teachers should always help to promote individual learning environment through appropriate use of ICT. ICT can be used as a substitute for almost in the classroom because chalk and talk method is the traditional aspect of teaching. It can be used as important supplement for classroom teaching in a large group. Teacher should make small groups of students in order to help individual learning among students. Teacher should play a role of facilitator in the teaching learning process and students always remain an active learner in the classroom it is possible only when a teacher make use of technology in every day classrooms. There should be appropriate use of ICT in classrooms that encourages in problem solving in a democratic way. The curriculum for students at the higher secondary level should be is designed to be capable for better implementation of ICT programme in schools. The teachers should always make use of audio-visual aids screen in the classroom for interactive and effective session. The programme of professional development of teachers must closely relate to the ICT curriculum, and particularly to the developmental stage that helps the schools to reach with respect to ICT. Finally ICT education should be one of the compulsory subjects for both arts as well as science students at the higher secondary level so that students can compete with the technological world.

CONCLUSION

Education is an important component of life of an individual that makes individual a better citizen of a nation. The education system has been changed due to modernization and industrial impact of the society. In earlier times the education was given to the students through chalk and talk method but the society is dynamic everything were changed the evolution of technology like computer, internet, laptops and other electrical devices that not only affects society but also the education system of the nation. In present era more than 90% educational institution are using computers for the storage and collection of data important in their institutions. Every teacher especially at schools level using internet knowledge for their subject teaching to enhance their knowledge not for themselves but also promotes same among the students. In Jammu and Kashmir the use of technology is also common at higher level of education but at school level less use of technology is there in schools because students are interesting to take part in ICT education but there is a lack of well trained instructor of ICT and lack of funds for it to implement in a better way. So to develop the education system of Jammu and Kashmir Govt. should take appropriate initiatives to implement ICT education at higher secondary school level fully that helps students to make efficient use of ICT in their daily lives.

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