INNOVATIVE STEP- INCLUDING ICT IN THE FIELD OF EDUCATION AND RESEARCH

Shivani Shrivastava, Ph. D.

M.A., M.Ed, Ph.D.(Education), Pgdca, Tagore Mahavidyalaya College of Education

E- Mail: drshivani57@gmail.com

Abstract

The purpose of writing this article was to analyse the role of ICT in research work in the field of education in various developing countries. Today people depend on ICT not only for survival but for pleasure , entertainment and it has included in all walks of life of each and every individual in this world. Today digital form of art and architecture has enriched our lives Today social networking has made the world so small that we can contact a person anywhere in this world just by one click One impact of this digital convergence and ubiquitous nature of ICT applications is that software and associated computational techniques have become important engines of social and economic development. It has been analyzed from the current evidences that impact of ICT on students learning outcome consists of qualitative studies collected in this reference shows that less used services among both male and female researchers were Web OPAC/OPAC, blogging, and electronic books. The study revealed that major hindrances faced by the male and female researchers are lack of training, lack of technical knowledge and limited number of computers. Research tools and methods like spreadsheets, databases and tools for numerical/statistical computations are the tools used for data handling and analysis. The ICT tool and method used currently by researcher and students is cloud computing in their research in a text box. So we can conclude from the above discussion that ICT is plays important role in the field of research work and has helped the researcher in each and every aspect and helped researcher in completing research in short time effectively, efficiently within limited period of time and all the criterion which were included in this paper for which this article is made like: To find out the level of use and purpose of using various ICT products in the research work in the field of education, to determine how ICT has impacted research work, to find out the problems faced by the users while using ICTs.

INTRODUCTION:

The purpose of writing this article was to analyse the role of ICT in research work in the field of education in various developing countries. Today people depend on ICT not only for survival but for pleasure , entertainment and it has included in all walks of life of each and every individual in this world. Today digital form of art and architecture has enriched our lives Today social networking has made the world so small that we can contact a person anywhere in this world just by one click One impact of this digital convergence and ubiquitous nature of ICT applications is that software and associated computational

techniques have become important engines of social and economic development. However, weaving ICT into all aspects of society, interconnecting the energy supply, critical communication lines, and collections of sensitive information also presents new and very substantial security risks of a nature not seen previously.

IN THE FIELD OF EDUCATION:

It has been analyzed from the current evidences that impact of ICT on students learning outcome consists of qualitative studies. Very few studies are conducted to answer the question of role of ICT in the field of educational research.Extensive descriptive information on and evaluations of projects incorporating ICTs in educational settings in advanced economies does exist.

CRITERION TO BE SEEN IN THIS ARTICLE:

(i) To find out the level of use and purpose of using various ICT products in the research work in the field of education.

the use of ICTs.

(iv) To determine how ICT has impacted research work.

(v) To find out the problems faced by the users while using ICTs.

USE OF ICT PRODUCT IN THE FIELD OF RESEARCH:

ICT PRODUCTS	MALE	FEMALE
COMPUTER	66%	55%
LAPTOP	68%	67%
INTERNET	78%	66%
MS-WORD	88%	46%
MS-POWERPOINT	89%	44%
MS-EXCEL	89%	56%
PRINTER	78%	78%
SCANNER	56%	66%
DVD/CD/PENDRIVE	90%	78%

Above table show that 78% per cent male researchers used e-mail and document exchange; 90.90 per cent for electronic journals; 82% per cent to locate and collect data; 67% per cent for online databases; 80% per cent for career development 50% per cent for preparing manuscripts, proposals and papers. As far as female researchers are concerned 68% per cent used ICT products for e-mail and document exchange 70% per cent for electronic journals; 60% per cent to locate and collect data; 50% per cent for online databases; 68% per cent for career development; 40% per cent for preparing manuscripts, proposals, and papers. The less used services among both male and female researchers were Web OPAC/OPAC, blogging, and electronic books.

PROBLEMS FACED WHILE USING ICTS

It was analyzed that when Researchers were asked to indicate the variousproblems faced while using various ICT products and services at different places .

The study revealed that major hindrances faced by the male researchers are lack of training, lack of technical knowledge and limited number of computers. Female researchers indicated that they also faced same problems. As far as awareness regarding the various ICT products is concerned 51.51 per cent male and 63.63 per cent female researchers indicated that lack of awareness of ICTs is also one of the major hindrances faced by the researchers to use the new technologies. Besides, lack of financial resources and lack of time in searching for information in the Internet as service is related to how you pay were some other problems researchers face while using ICT-based products and services

LEARNED TO USE ICTS

From the information collected through previous researches it is indicated how different researchers learned to use ICTs.

SEARCH ENGINES PREFRENCES	MALE	FEMALE
GOOGLE	87%	78%
MSN	67%	77%
YAHOO	56%	45%
ALTA VISTA	45%	44%
EXCITE	44%	34%

From the above table it is indicated that 90% per centof the male researchers learns to use ICTs by guidance from colleagues, 60% per cent by guidance from staff, 78% per cent by trial and error, and only 20% per cent have formal training. A good majority of 80% per cent female researchers also learned through guidance from colleagues, 60% per cent by guidance from staff, and 50% per cent by trial and error. Only 29% per cent female researchers have formal training.

TYPES OF SOFTWARE USED FOR DATA HANDLING AND ANALYSIS:

Research tools and methods like spreadsheets, databases and tools for numerical/statistical computations are the tools used for data handling and analysis.

It is seen that usually the methods and tools which are not used by researcher in their work due to lack of access, knowledge and training which are main barriers and that the cost and ability to purchase software are:data mining, GIS software, statistical analysis packages, and software for modelling and simulation.

It has been analyzed that for future high priority in research work specialist needs for ICT services or tools, which cannot be met within their research group , collaboration tools (including document sharing, wikis, blogs etc) and data sharing.

CLOUD COMPUTING

The ICT tool tool and method used currently by researcher is cloud computing in their research in a text box, the most common types of cloud computing services used by the researcher includes storage, collaboration , software as a service and file transfer .Those researcher from the medical and health sciences are most likely to be interested in using cloud computing in the future

South Australia is facing a large influx of research data and will need to assess its future data storage capabilities to cope with the growing storage demands of its researchers.

Researchers from different fields will need significant additional storage capacity include the physical sciences, medical and health sciences, agricultural and veterinarian science, bioinformatics, and biological sciences.

It is seen that researcher commonly store their research data on internal computer hard drives, external hard drives, and USB/flash drives. Efforts should be made to investigate how researchers can improve their research data storage practices so that data is properly stored and backed up and can easily be shared according to the ARC and NH&MRC recommendations. Most researchers indicated that they would like to share their data using a file transfer system similar to Dropbox or an online data repository and were open to finding out more and adopting research data management best practices.

When HPC usage was analysed from the previous articles , the most common users of HPC were the physical sciences, engineering and technology, biological sciences, mathematical sciences, chemical sciences and the information computing and communication sciences. According to them they are currently using cloud computing in their research and 26% said are interested in using it in the future.

From the previous articles it is clear that current research environment is well placed to be receptive to eResearch tools and services. Usually researchers indicate that they have eResearch needs, and are already engaged in work that lends itself to eResearch, such as collaborative research, managing large and complex data sets, visualisation that requires high-speed broadband, cloud computing, high-performance computing and storing large amounts of research data.

DISCUSSION AND RESULTS:

From the earlier studies it is revealed that the research conducted in this field shows that:

There are several limitations. The overall response rate for e-mail surveys, online surveys in higher education environments, self-reported assessment of the individuals' perceptions, non response bias may have been introduced into the study which may limit the generalizability of the results. The article contributes to the necessary research on ICT in the academic and research setting, in the field of education. It has helped to identify the current needs and challenges faced by professionals and students when interacting with ICT. More research is needed in order to effectively integrate the use of ICT into the field of higher education. Achieving this potential will depend on understanding the current needs, challenges, and limitations of ICT use in different academic settings.

CONCLUSION:

This paper has explored the applicability of ICT based analytical tools in research. It has been argued that differences between qualitative researchers and the science that develops not necessarily benefit of qualitative research. While there are some elements of the qualitative research process that can benefit from computer assistance the process of data analysis could be harmed by reliance on software packages. The use of computer programs in qualitative data analysis is a practice that should be viewed with caution.

Researchers who make use of these packages must remain alert to the need to preserve the integrity and context of the original material and not lose sight of this during the process of coding and subsequent analysis.

So we can conclude from the above discussion that ICT is plays important role in the field of research work and has helped the researcher in each and every aspect and helped researcher in completing research in short time effectively, efficiently within limited period of time and all the criterion which were included in this paper for which this article is made like:

- To find out the level of use and purpose of using various ICT products in the research work in the field of education.
- To determine how ICT has impacted research work.
- To find out the problems faced by the users while using ICTs.

Have been seen to be successfully implemented in the area of research by various earlier researchers according to this article.

REFRENCES:

Ashish Joshi, Ashish Joshi, MD, PhD, MPH, is an assistant professor in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.

Jane Meza, Jane Meza, PhD, is a professor and chair of the Department of Biostatistics in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.

Sergio Costa, Sergio Costa, PhD, is the director of distance learning in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.

Douglas Marcel Puricelli Perin, Douglas Marcel Puricelli Perin is a research assistant at the Center for Global Health and Development in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.

Kate Trout, Kate Trout is research assistant at the Center for Global Health and Development in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.

Atul Rayamajih, Atul Rayamajih, MS, is an information technology manager in the College of Public Health at the University of Nebraska Medical Center in Omaha, NE.