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The Use of ICT in Teacher Education

Introduction

The purpose of this paper is to share with the readers the findings of a study to investigate the prospective teaching behaviors with ICT integration at secondary level. This study seeks to investigate the likely attitudes of teachers towards the use of ICT for educational purposes if equal access is given to them. ICT is expected to boost the classroom but given that human beings generally show resistance to change, it is imperative to focus on teacher's motivation and readiness to use ICT in teaching. There has been a fundamental shift in the way in which work is completed and the nature of interactions in schools due to the increasing use of ICT. ICT is defined as any technology or device that has the capacity to acquire, store, process, or transmit information and can include personal computers, the Internet, mobile communication devices, and email.

However, comprehensive researches investigating the level of integration of ICT in the secondary schools have been carried out. The aim of this research is to assess the level of integration of ICT in the secondary schools in Mauritius. Moreover, this study also aims at identifying the factors that are responsible to determine the level of integration of ICT in the secondary schools.

Results based on the analysis of data relating to 200 educators and 400 students show that computers are available in almost every house in Mauritius which reflects the vision of the government. The new generations of the students is computer literate due to the heavy use of ICT around them and are more likely to follow a career in the ICT field. And finally, ICT is seen as a very useful tool to enhance the teaching and learning process in schools.

New Reforms in education in contemporary world are to find out effective approaches for trainee teachers and it must be linked with integration of ICTs in teaching instead use of only technology. The training program for trainee teachers are designed for enhancement of knowledge, skills required and responsiveness to the modern challenges. He further highlights

g process is emerging as important source to initiate new participation of trainers and trainees.

It is imperative to understand that the conventional professional development programs are based on traditional training approaches, rigidity, costly, overwhelming and did not fulfill the requirement of modern needs.

Changing scenario of professional development and integration of ICT will well equip trainee teachers and their initial "Staff development topics of high demand include improving students reading and writing skills, technology skills, working with inclusion students, working with diverse populations, active learning strategies". Majority of trainee teachers in their initial training know very little regarding use of technology in teaching and learning process and its effectiveness in instruction.

It is also fact that currently more investment has been seen in ICT facilities and using ICTs as an important tool for teaching which makes fundamental changes in teaching practices. It is now big question that does ICT change the foundation of teaching methodology or it is a transition process for teachers. Mentioning importance of ICT he describes that due to availability of technological aids there are many changes in teaching learning process and these changing factors have larger impact on self-reliance by teacher educators, content, teaching methodologies, and students motivation including syllabus. While discussing significance of use of ICT tools in initial training of trainee teachers, some scholars put emphasis for qualified ICT skilled teacher educators for professional development of trainee teachers.

Teacher educators must be highly skilful to use ICTs tools and multimedia for preparation of teacher trainees. The use of teaching aids increase the prospect students with more chance to utilize their capabilities for challenging tasks, enhance their self-learning, make them confident when they face teachers, take difficult tasks comfortably and work as independent learner. More ever, to face the challenges of 21st century, it is very important to incorporate use of information and communication technology in teacher education courses to maximize learning achievements and achieve educational objectives.

Use of ICT provides help to teachers and students

Skinner highlights that for the improvement of learning and teaching process, ICT has potential to improve the learning and teaching by using devices of technology. Interest in the application of ICTs must be increased by teacher educators so that they could learn more as compared to the contemporary students.

The later life of our teachers and students is not about having technology; it is about making of most effective use of what you have and what is reality available to you. This is independent of technology as it is a personal attribute in students and teachers and so can operate in technology rich environments just as well as it can in no technology environments.

Digital knowledge and computer skills must be known by teacher educators but there should be practical approach for use of that knowledge and skills that should be the worth of teachers. The aim of teacher educator is to facilitate trainees for learning outcomes; therefore, it is prime responsibility of teacher educator to transform information and knowledge to trainee teacher.

Teacher educators make difference in learning achievements of student by using ICT-supported teaching methodologies. The importance of ICT is built-in nature of responsiveness and its capability to provide feedback which support teacher trainees and motivate them to seek guidance from teacher educators. Teacher educators are not only managing class but they work as counselors, managers and role models as professional.

The important features of initial teacher education enhance proficiency in knowledge, skills, capabilities, understanding, professional commitment, character and social values. Initial teacher training is very crucial phase of professional development.

ICT enables lifelong learning

The machine instructions provide chances to students to learn and discover knowledge about the topic in accordance with the specific requirement. With the use of technology in education and training a new concept of lifelong learning is emerged which has replaced old one. The proper use of ICTs in learning process promotes cognitive skills and lifelong learning at higher level which plays important role for job working environment.

"The new literacy however cannot be contained in the same way. There clearly exists a need to reconsider literacy as an ongoing development referred to earlier lifelong literacy. The acquisition of the new literacy cannot be picked off at eleven. Instead, while acknowledging the need for basic extended and advanced literacy skills, reflecting changes made in reading and writing demands through ICT".

The original meaning of literacy that covers read, write and capabilities to communicate among each other but the new concept of literacy is known as digital literacy which is through different electronic mediums, graphs, illustration, computer graphics and hypertexts and these entire medium are used in teaching learning process using ICTs in education. "Students seem to be using ICT related to activities within the lifelong learning paradigm, which speaks in favor of

development of a lifelong learning paradigm". Experiences with communication technology in instruction are lifelong learning.

Role of teacher and integration of ICTs in teaching

The role of teacher is now as good facilitators therefore, he has to provide conducive environment for students to find out the solutions according to their own observation using technological resources. Teacher is trouble shooter for learner when there is problem in content knowledge or comprehension, therefore, his role is vital as compared to self-obtained knowledge using machine. The role of teacher is changed but traditional role cannot be undermined. With advancement of technology role of teacher is reshaped. Besides his traditional role, he plays a

role of facilitator and using ICT tools coordinates closely with pupil to enable effective learning environment.

"Technology integration need changes to teachers' instructional roles in the classroom. The teachers' role in a technology infused classroom often shifts to that of a facilitator or coach rather than a lecturer." and "teachers really are educational designers". Educational process for delivery has been changed due to integration of ICT in teaching methodology. In traditional role teacher was directing but after integration of ICT in teaching methodology using various tools, he is facilitating and monitoring activities of students. It is wrong to say that role of teacher is no more after ICT-supported instruction but it further enhances role of teacher argued that "teachers need to be given the evidence that ICT can make their lessons more interesting, easier, more fun for them and their pupils, more enjoyable and more motivating". "Power of electronic communication is a powerful tool that can be used easily and effectively". ICT- enriched innovations enhance quality of education in which teacher plays a vital role in delivery.

Conclusion

Technology is claimed to be a universal language and is regarded as one of the influential agents of globalization. On the global front, ICT is already creating new, open learning environments and in the local context, the present government has announced in the latest budget, that classrooms will be equipped with ICT support and that teachers will be expected to use innovative teaching strategies, more precisely ICT for teaching. Furthermore, during the recent years, the government has embraced the vision of metamorphosing Mauritius from an agricultural island to a cyber island.

In line with this vision, teachers are expected to play a catalyzing role in this transformation process. The use of technology in education is an emerging field of study as it involves the introduction of new instructional possibilities. Consequently, the aim of this study has been to



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the uptake of ICT by teachers as well as the barriers which
of ICT in teacher education.