

Teacher Empowerment, Training and Professional Development with ICT

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Abstract

In this contemporary world, Information and communication technology also known as ICT has become the important aspect of life since it has enough potential in accelerating, augmenting and it has the potential to accelerate, enrich, and expanding knowledge and skills. Also, there is a necessity of adjusting to the modern society in order to eliminate the challenges that are faced in this knowledge age. The prevalence of ICT has resulted in prompt social, economic and technological transformation. ICT, undoubtedly has brought a greater impact in the teaching quality, learning in the field of education. For instance, ICT in research offers opportunities for the colleges of teacher education in communicating with one another by means of emails, chat rooms and many more. ICT also aids in relating experiences from college to work practices and also in creating economic sustainability for the next generation. Thus, it is important to know about the use of technology in the teacher education institutions for enhancing the classrooms of the 21st century as well as for empowering the teachers. In such a quickly shifting milieu, this paper tries to explore in what way and by what means teachers can be empowered for meeting the challenges and expectations efficiently, which is a critical concern in policy making of teacher education and professional development of teachers especially in India.

Keywords: *Computer, Empowerment, ICT, Internet, Knowledge, Professional Development, Teacher Education, Technology, World Wide Web.*

Introduction

The notion of empowerment has developed to be a most known shibboleth especially in education. The teacher empowerment is acknowledged as a means by which teachers can offer perceived managerialism (Clarke & Newman, 1997) as well as performative (Wilkins, 2010) education on offer in the 21st century and involve with their students in much better way. The empowered teacher is therefore hypothesized as the person who is well-prepared for gaining control and engaging in the process of learning in order to making learning, a collaborative effort instead of a diffusion model of teaching that inflicts simple knowledge. The empowerment processes are in concurrence with the modern political discourse in capitalist societies, wherein regionalization, choice, responsibility and professionalism are endorsed as important features in the societal governance in this age of globalization. Hitherto these movements of ‘liberatory’ do not sit well with experiences of several teachers as their progression in work and educational prospects could be claimed to be progressively bureaucratized and also centrally controlled. The educational policy adopted by the Government has broadly defined the education’s structural contexts, the content of the curriculum and the pedagogical practices. In exploring this specious incongruity, it is significant to be familiar with the notion of empowerment is not an unconcealed one, besides there are various explanations of the role that it plays in modern education.

In a very short time, ICT has turned out to be one of the fundamental building blocks of contemporary society. Several nations today are making use of ICT in order to master the basic skills and then implement the ICT concepts as part of education in conjunction with reading, writing and numerical competence. One of UNESCO’s prime objective is ensuring that all nations are having access to the necessary educational facilities irrespective of the nation’s development. Retaining an ability of advising the national governments on the utilization of technology in schools, especially, on the ideal balance in the local settings between ICT and conventional educational practices and supporting nations in evolving educational software and resources are key constituents in achieving the Education for All goals.

It is apparent that the teachers at all levels from primary to higher education are required to have computer knowledge. One should also keep in mind that teachers working in the institutions of teacher education should have better computer skills than any other person in the field of education and this is because they are responsible for molding the teachers of next generation. Thus, it is very important to train the teachers in utilizing the technology and ICT tools in order to empower them and enhance their professional development. In other words, it can be said that ICT is not simply the bloom of the educational accomplishments, but an alternative opportunity for increasing the efficiency of the educational process.

Role of ICT and Teacher Training

The Role of ICT in teacher training are as follows

Teachers are now considered as knowledge distributors as well as the proactive facilitators. ICT is starting to redefine the role of the teacher in this information age. According to Vikramshila Education Resource Society ShikshakSammelan 2009, ICT is for Quality Education. In countries like India, it is known fact that teachers are usually unenthusiastic in using ICTs, particularly computers and the internet. Few reasons for this are listed below. Some of the reasons for this reluctance include:

- Improper software design,
- Doubting the computer efficiency for improvisation of learning outcomes,
- Absence of administrative support
- Time consumption in learning the technology
- Being worried about losing control over the classroom since ICT is more of learner-centered.

The Professional Development of Teachers and ICT

“The Information and communication technology (ICT) is the scientific technological and engineering discipline and management techniques used in information handling and

processing, their application; computers and their interaction with men and machines and associated social, economic and cultural matters” (UNESCO).

UNESCO in the year of 1998 has briefed about the ICT’s implications and the roles in the educational field in its world education report. By making use of ICT tools and technology like computer systems, camera, video, internet facilities, World Wide Web, CD ROMs along with software applications like word processing, excel sheet, e-mail, libraries that are available digitally, video conferencing, projectors and many other, teachers can overcome all hurdles in teaching as well as learning. This is because of the fact that ICT acts as a tool for training teachers, irrespective of their geographical location.

- ICT is exceptionally beneficial for teachers’ professional development of teachers. The points stated below helps in understanding how ICT helps in enhancing the professional development of teachers.
- The technological development is considered to have a special role in teaching and learning process, teachers are asked to not give much importance to this aspect alone. Schools with the maximum level of delivering ICT related skills and experience to students are not those with substantial computer course necessities, but ones that made use of ICTs on a regular basis throughout the teacher professional development and the teaching and learning process.
- Activities related to Professional development must model efficient practices and behaviors and should support teamwork among teachers. On-going professional development at the school level with the help of ICT facilities is chief driver for achievement.
- ICT augments teaching by augmenting the preliminary preparation by offering good teaching as well as training materials along with simulators, recordings and feedback mechanisms. But many teachers consider that simulators might divert the minds of students from the concepts to the imaginations.
- ICT has also removed the obstacles like distance, time between the learner and teacher

- ICT has provided a healthy and collaborative association among teachers, schools and universities and empowered teachers in expertising rich resources in virtual space.
- In countries with OECD (Organization for Economic Co-operation and Development), many research holds that the most efficient uses of ICT are those in which the teacher, supported by ICTs help in pupil's better understanding either through whole-class debates or individual group work.
- The teachers' Pedagogical practices with the help of ICTs enhances the teaching practices only to a certain extent. ICTs could be utilized for reinforcing the already existing pedagogical practices into the contemporary educational practices so that the interaction between the teachers and students change.
- This informative software and the other intelligent tutoring systems have resulted in the reduction of teacher training cost.
- ICT delivers ultimate professional development by offering courses in a virtual state, through online portals and video conferencing.
- Thus, ICT has the potential to revolutionize the whole system of teaching profession through exchanges of resources among cyber communities, sharing ideas and experiences together in order to collaborate it on the projects.

ICT Enabled Teacher Education

There exists multitudinous concerns that are existing currently in the domain of teaching

The following points provide some prominent approaches as well as means towards ICT Enabled Education for teacher since there are certain pitfalls existing in the current systems. As ICT's applications could pose as a valuable catalyst for successful mentoring. The institutions for a teacher's education impose a greater opportunity as well as responsibility that designed their educational system leading to the society. These approaches emphasize in delivering a generalized implications that could exceptionally contribute towards enhancement of ICT enabled teacher education:

- It is pivotal for the teachers to have knowledge and skills that are essential for carrying out some academic exercises using digital tools and resources that facilitates students towards achieving a higher academic standards.
- The implementation of revised ICT resources funding should be increased logarithmically for meeting up the need for ICT equipment and resources that are currently found to be shortage. Through imparting technology and via on-line mentoring has become the pertinent ways of today's education. Technological planning and their implementation in ICTs among teacher education in its institutions should be regarded as a significant aspect and requires a much more proactive steps towards preparation and implemented.
- There exists different approaches that can attribute towards professional development of teachers, under the basic context that roots deeply in regards to ICTs and its usage in education. Professional development tend to infuse ICTs towards teaching and learning. As both actions could be regarded as an ongoing process and cannot be neglected as an injection of training.
- Allocation of a separate units and personnel for organization, as well as to assist in the public's use of ICT tools and materials for ICT-enhanced instruction.
- It is quintessential that the educators who are facilitating the teacher by integrating ICTs in their courses needs support from the organization (i.e., in the form of incentive payments) and the actual load of the course for the educators must be decreased.
- NCTE & services underlying relevant advisory must more closely worked with colleges and schools to determine training needs for staff members and in aiding them for organization of appropriate training programmes. Also particular attention is needed for organizing training courses among teaching methods that are imparted for ICT.
- It is much necessitated that the teacher educators must be of adequately equipped via didactic competencies that intends to simulate for newer roles as experts within learning process. Also it should impart ICTs as presentation tools (via overhead and LCD projectors, electronic, television, guided "web-tours", whiteboards, as students tend to

simultaneously view same resources over computer screens) in the classroom. They should act as role models for prospective teachers by using ICTs in their courses.

- In-service/ pre-service training under ICTs for should be substantially improved under both quantity as well as for quality. Newer methods for teaching involves using pedagogical analysis comprising new evaluation techniques for ICT.
- Teachers require support while meeting their challenge that effectively integrate ICT in classroom practices, such that students can place at its forefront of advancing exceptionally in their teaching and learning techniques.
- It is quite mandatory that each classes should have a computer at least followed by computer-projector system and Internet access as every teacher education institution must definitely have at least one laboratory to be available for students, thus ensuring diffusion of effective use of today's technology.
- Some of the indispensable resources viz, Computer, internet, satellite communication, and the presence of various Electronic Medias are the real new methods of learning. Teacher educators as well as prospective teachers must be wary of ICTs and its benefits. A new ICT-related course must comprise both ICTs and a field of study (e.g., Maths, language, science), which requires integration within its curriculum.
- There lies some additional requirement pertaining to incentives and motivation for teachers in indulging themselves most actively in an ICT based development activities. Through imparting variety of incentives which includes certification, pay increment, professional advancement, paid time off to participate in professional development, formal and informal recognition at the institution and community levels.
- Innovative practice is the way to enhance our quality education. Teachers should nurture and strengthen such practices with proper evaluation so that we can exist in the challenging atmosphere. The quantity and quality of the lessons addressing technology usage should be increased.

- More of the ICT-related courses must be offered in the case of prospective teachers and every ICT-related courses are based prominently with practical approaches, rather than theoretical approaches.
- Redesigning the course content must acquire more benefit for ICTs and require support by a course delivery system like Learning Management System (LMS).
- Adequate accessibility in operating computers for the teachers needs to be provided alongside with sufficient technical support, as they are to be effectively imparted on ICTs. Academic staff are found to be greatly dependent on an ICT facilitated classroom setting.
- The educational institutions where the teachers were carrying out their service must imply leadership among the pre-/in-service teachers followed by modelling newer pedagogies and tools that are essential for learning.
- Availability of digital content should be meaningful, high quality and culturally responsive element is essential for teachers and learners. It is much expected that the educational institutions must reverberate the dynamics throughout the professional area via devising a well-structured programme that hones professionals to experience knowledge and skills teaching & class management.
- It is necessary for the teacher to have a sound and sufficient education alongside with providing a qualified in-service training opportunities, and also learning environments should be comprised of minimum necessary technological tools of interest.
- The actual content of teacher education's curriculum must be of world-class standard and must be globalized, thereby conglomerating these world-class materials as well as designs for learning/ teaching followed by maximization of global relevance and its exposure in different development areas.

Future of ICT in Teaching Profession

ICT also consist of web TVs, Net PCs and Web-Based Education that delivers convenience, ease of understanding, flexibility and novelty in both learning and teaching. Teacher

education integrated with ICT has more significance especially in the Indian education system which looks forward in maintaining global partnership on top of leadership in the modern society. Prof Ram Takwle (2003) on IT driven education: “They are changing the methods of content generation, content storage, content packaging and content delivery and hence offer a new paradigm of education.” Thus, the multimedia packages and programs are moreover envisioned in supplementing the classroom activities and aid in easy assimilation of these activities. ICT particularly in the 21st Century setting of teacher education tries to fulfill and achieve the below said objectives.

- It provides a visualization in the minds of the learners.
- ICT sanctifies the learner’s needs by offering items and materials of higher standards.
- It aids in changing the definition of knowledge, education and understanding by providing a definition that gradually includes literacy which is digitized by means of multimedia.
- Multimedia helps in bringing a control over the learning and teaching environment and this aids in learning through their own failures and mistakes.
- ICT assists the learner in having over the curriculum, prioritizing the subjects, content, that in return increases the learning efficiency.
- In Contrast to the books, ICT tools like multimedia is rather in interactive in nature and builds inspiration and curiosity amongst the students as well as the teachers that in return helps in meeting the individual needs efficiently
- ICT cultivates the ability of self-learning and act together as well as individually. Through this, both teachers and students attain great experiences.
- ICT-empowered simulated situation reduces real world threats e.g. science practicals.
- ICT is an influential development with aspiring role in teacher education, Digital and Internet.-based multimedia that alters the current trend in the field.

Conclusions

Indian Educational system is under ever-increasing pressure in making use of ICT for imparting knowledge and skills. Today, Teacher education is facing major challenges in making teachers of next generation who will be capable of effectively using the newer tools in their teaching practices. The teacher education system empowered by ICT driven infrastructure can have a better opportunity in ensuring academic excellence and quality instruction. The utilization of ICT in teacher education and the professional development is inadequate, chiefly on enhancing the competency of distribution of curriculum along with professional competence. A lack in the infrastructural facilities in the educational institutions makes it rather difficult in bringing a paradigm shift in teacher training. This has a substantial role in playing the constant use of ICT in colleges and schools. Teachers ought to have enough accessibility to digital technologies and the Internet in their classrooms. They should feel responsible and should strive to bring changes in their institutions and they should also feel empowered for witnessing the change that they have brought in the educational system and the society on the whole.

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