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Teacher Education Curriculum for Digital Age Learner

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ABSTRACT

Today students are technologically more advanced than the teachers.But unfortunately the teacher educators and teachers have failed to keep pace with the changing times.What the teachers require is not just agood level of skill but a good conceptual understanding about the place of information technology in contemporary pedagogy along with a basic not necessarily advanced technological competence. The purpose of the study was to present a systematic review of the available literature concerning the problem. The problem is'Teacher education curriculum for digital age learners'. Researchers suggest that teaching needs to be purposeful and adaptive in technological world. An important aspect is the extent to which the present and future teachers understand and are sensitive about Information Technology to integrate it into their pedagogy. The study involved content analysis of the available literature on teacher education and digital learning both online and offline. It was found that merely introducing technology to the educational process is not enough to ensure technology integration since technology alone does not lead to change. Rather, it is the way in which the teachers integrate technology that has the potential to bring change in the educational process. Findings suggest that technology integration must become a component of the entire educational process and not be confined to just training courses. It was concluded that there is a need to redesign teacher education to focus on the learner, to professionally equip prospective teachers to evolve pedagogic approaches and create a learning environment that addresses the needs of the learner.

Keywords: I.C.T., Teacher education, pedagogy, curriculum.

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INTRODUCTION:

Teacher education is based on the thesis- 'Teachers are made not born. Teaching is considered an art as well as a science and the teacher has to acquire some skills which are tricks of the trade'. The National Council for Teacher Education (N.C.T.E.) has defined teacher education as "A programme of educational, research and training of persons to teach from pre-primary to higher educationallevel. Teacher education is a programme that is related to the development of teacher proficiencyand competency that would enable and empower the teacher to meet the requirement of theprofession and face the challenges therein".

The teacher is required to acquire adequate knowledge, skills, interest and attitudes towards the teaching profession. The teacher's work has become more complicated and technical in view of the new ideas in psychology, philosophy, sociology, modern media and material. The teacher can be made proficient with well planned and imaginative pre-service and in-service training programmes. **Teacher education** refers to the policies and procedures designed to equip prospective teachers with the knowledge, attitudes, behaviors and skills they require to perform their tasks effectively in the classroom, school and wider community. But what knowledge, attitudes, behavior and skills teachers should possess is the need of the hour. The teachers are entrusted with transmitting society's beliefs, attitudes, as well as information, advice and wisdom, and with facilitating learners' acquisition of the key knowledge, attitudes and skills that they will need to be a good and productive citizen.

EMERGENCE OF THE PROBLEM–

Teaching is becoming one of the most challenging professions in our society where knowledge is expanding rapidly and much of it is available to students as well as teachers at the same time.Deliberations at the national and international forums have brought out the necessity for ensuring possibilities of continuous learning for the teachers and the need to sensitize them to fundamental aspects of human learning and to diversity and inclusion. Teacher education must

involve system of continuous engagement with fundamental issues of education and capacity building and her motivation to learn are crucial elements. These would require creating suitable facilities and opportunities to learn more and to grow professionally and personally. The understanding of the nature, content and process of educating children was articulated carefully and coherently in the NCF 2005, which was also in consonance with the contemporary developmental ideas in education.

The teacher education policy in India has evolved over time and is based on the recommendations contained in various reports of the committees/commissions on education. The important ones being the Kothari Commission (1966), the Chattopadhyay Committee(1985), The National Policy of Education (1986), P.O.A. (1992), Acharya Ramamurti Committee(1990), Yashpal Committee(1993) and National Curriculum Framework(2005). India has a large number of teachers and needs many more. All processes of teacher recruitment, training, motivation, incentives, retention and feedback therefore have to be planned on a large scale. (Teacher Education: Vision statement, 2012).

SHORTCOMINGS AND DEFECTS:

Different committees and commissions have reviewed the programme of teacher education and recommended appropriate action for removing the following weaknesses –

1. The teacher education curriculum is rigid, stereotyped and far removed from the realities of school and national life.
2. The methods, media and materials that are used in teacher training institutions are not relevant, economical and practicable in day to day life.
3. Practice teaching is mechanical, ritualistic and superficial without necessary involvement and understanding of pupil teachers.
4. Evaluation procedures are mostly subjective, unscientific and unsystematic.
5. Supervision of practice/student teaching is biased and subjective.

6. The physical resources and facilities are quite insufficient, poor and not up to date.

RATIONLE FOR CHANGE:

In the present world globalization has made its impact on all sectors of the society and education is no exception. What is needed at the hour is a globally competent workforce. People need to have global skills that would help them survive and compete in the global world. While trying to shape an educational system to meet with the global standards it is important that the education be given equal importance. Teachers whether at school level or higher education level form the backbone of the educational system of a country. Only if teachers are skilled and trained globally can they impart the same to their students. Teacher education plays a very vital role in the making of a quality teacher. Teacher education programme should provide teachers with skills and competencies to meet the diverse learning situations. A lot of innovations and creative techniques have to be implemented for effective curriculum transaction in teacher education. Instructional strategies should be so designed that it actually helps teacher education to develop the global skills genuinely and also help them impart it to their students. Today with globalization on a rise what is needed for future success is a knowledge society that constantly develops new ideas, technologies, methods, products and services. And in building such knowledge societies teachers play a very vital role. So student teachers have to be trained effectively and for this innovative teaching strategies are needed(Kothari and Thomas, 2011). As new concepts of learning have evolved teachers are expected to facilitate learning and make it meaningful to individual learners rather than just to provide knowledge and skills.

The nature, objectives, contents and pedagogy of subjects at the school level have come under the impact of liberalization, privatization and globalization. Such a situation demands appropriate changes in teacher education as well. The curriculum, pedagogy and evaluation needimprovement and radical transformation (Doss, 2012).Increase in the population of school going children, rising aspirations of the people along with explosion of knowledge and

techniques for imparting knowledge have emerged as new challenges for teacher education. The possibility of acquiring knowledge from sources other than the teacher, books and from outside educational institutions has increased tremendously. In the emerging context the possibility of teachers becoming outdated and professionally less effective has increased. Thus, constant re-education and in-service programmes for teachers and their educators have become the need of the day (ibid.).

Globally, educational systems are feeling the need to adopt innovative methodologies and to integrate new Information and Communication Technologies in the teaching and learning process to prepare students with the knowledge and skills they need in the 21st century. Teaching profession is evolving from an emphasis on teacher-centered, lecture-based instructions to student centered, interactive learning environment (Mary and Alexander,2012,p.134). Therefore the challenge for higher education institutions, particularly teacher education, has been to create a new generation of teachers capable of employing a variety of technology tools into all phases of academic, administrative, research and extension function (ibid.).

INFORMATION AND COMMUNICATION TECHNOLOGY:

As per UNESCO the term ICT was conceived as the tools and the processes to access, retrieve, store, organize, manipulate, produce, present and exchange information by electronic and other automated means. These include hardware, software and telecommunications in the form of personal computers, scanners, digital cameras, phones, faxes, modems, C.D. and D.V.D. players, recorders, digitized video, radio and T.V. programmes, database programmes and multimedia programmes. (UNESCO Bangkok, 2003, p.75).

E-learning or the web based learning is an all encompassing term generally used to refer to computer enhanced learning. It includes the use of technologies such as multimediaCDROM's or websites, discussion boards, collaborative software, e-mails, blogs, wikis, text chats, computer aided instruction, simulation, games, learning softwares with possibility of combination of

different methods. Communication technologies are generally categorized as asynchronous or synchronous. Asynchronous activities use technologies such as blogs, wikis and discussion boards. Synchronous activities occur with all participants joining in at once as with a chat session or a virtual classroom or meeting (Khirwadkar, 2010). E-learning includes all the courses, workshops and activities, formal and informal where students and teachers learn about integrating ICT across the curriculum to support student learning. E-learning focuses on where and how technology should be used with pedagogy. **It embraces learning by, with and through ICT**(ibid.).

Digital learning: According to the International Reading Association (2012), digital learning is "any instructional practice that effectively uses technology to strengthen the student learning experience. Digital learning encompasses a wide spectrum of tools and practices, including using online and formative assessment, increasing the focus and quality of teaching resources and time, online content and courses, applications of technology in the classroom and school building, adaptive software for students with special needs, learning platforms, participating in professional communities of practice, providing access to high level and challenging content and instruction, and many other advancements technology provides to teaching and learning.

SUGGESTIONS-

Teachers play a vital role in realizing the educational goals of a dynamic society. The quality of teachers is of prime importance for the success of any educational programme. Teacher competenciesinclude the following three fundamental professional competencies (Bjekic and Zlatic, 2006):

Educational competencies- knowledge, skills, abilities and motivational dispositions to realize educational and professional roles;

Course content competencies- knowledge and skills from the course content and developed activities to teach the students about the knowledge and skills;

Communication competencies- knowledge, skills, abilities and dispositions to realize the goals of communication and teaching. To gain the expected educational outcomes a teacher can use information and communication technology. Competencies related to handling the digital platform for teaching would serve to enhance the professional competencies of teachers.

There are three dimensions of the teachers' ICT competencies (Awouters et al, 2009)

1. The teacher knows what learning activities using ICT can be used in teaching (**ICT Awareness**).

2. The teacher has the necessary skills for using hardware and software (**ICT readiness**)

3. The teacher knows the pedagogical-didactical elements of ICT (**ICT drill and practice**)

STRATEGIES FOR REDEFINING TEACHER EDUCATION(Teaching and Learning in the Digital Age: Lebanon's National Educational Technology Strategic Plan,2012) -

- Prepare pre-service teachers so that they can appropriately incorporate technology into their teaching.

-Prepare pre-service teachers so that they are adept in using, evaluating, and choosing technologies.

-Prepare pre-service teachers to so that they can modify their curricula and develop materials using available technologies.

-Prepare pre-service teachers to learn how to be resourceful.

-Prepare pre-service teachers for a changing educational world equipping them with the knowledge of emerging technologies curricular and instructional implications.

-Motivate teachers/educators that technology can make their jobs easier.

-Encourage teachers to teach in ways they have not taught before.

-Develop technological innovations that are user friendly and cater to different learning styles.

But any training however well designed it is, the transformation cannot be achieved without the leadership, commitment and initiatives of the teachers and teacher educators themselves. These initiatives are –

- Ready for innovations and to adopt a flexible attitude to learn, relearn new technology.

-Motivated to use new technology.

-Self learning using tutorials available online.

-Enrolling for ICT training programs.

-Attending ICT training courses, seminars, conferences and workshops.

-Feeling the need and keeping up-to-date with the latest developments in ICT through journals, magazines, newspapers and the internet.

-Carrying out Action Research to try out various models of technology integration and publishing the result of the same.

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CONCLUSION –

Education, as a field of specialized studies is inter-disciplinary in its very nature. Since different branches of learning are involved in understanding the presage, process and product variables of education, it is essential that formulation of teacher education programme adopts a holistic approach in order to promote proper understanding, insight and thinking on matter pertaining to this field. The prospective teacher may be encouraged to organize, express and communicate their ideas clearly in the class. Student teacher should be encouraged to the use of divergent thinking and problem solving strategy in classroom transaction. The teacher educators will be required to have clarity of thought in respect of components of course, objectives of teaching and their relevance to educational and social goals. The interdisciplinary approach in teaching has to be accepted and implemented for developing comprehensive understanding and vision of educational studies. Learning outcomes have to be assessed continuously. This would help in modifying, adjusting and improving transaction strategies for better acquisition of knowledge.

Even when pre-service teachers are trained to integrated technology in their instruction, many face the barrier of access to technology in their schools. In many instances, if classrooms have a computer at all, they usually have only one, and computers labs are often overbooked. Schools fortunate enough to have computers may still have difficulty keeping up with hardware and software upgrades or with maintaining reliable Internet connections. Digital Transformation, the International Information and Communication Technologies (ICT) Literacy Panel (2002), argues that our conception of the digital divide must be expanded: "A continued focus on building infrastructure should be complimented by an effort to identify those without an ability to manage, integrate, evaluate, and create information in a traditional sense and to provide them with the necessary tools to acquire these skills" (p.1). Without these skills as a foundation, "all the hardware and access in the world will not decrease the existing gaps currently defined by the digital divide" (Gonzalez, 2002).The infrastructure for preparation and orientation for teacher

educators is quite inadequate. Besides, there is lack of proper planning and implementation strategies for organizing in-service education courses. Professionally competent, committed and interested persons should be entrusted with the responsibility of preparing teachers. But the infrastructural facilities have to be improved and the people in-charge of planning and execution should have adequate expertise and involvement in the programme. Further there should be sufficient monitoring and supervision and at the end, necessary evaluation for getting feedback. Teacher education institutions have to be provided with adequate and appropriate resources – human, physical and academic- for meeting successfully the new challenges of the emerging society. Technology alone cannot improve an educational system. It cannot turn a bad teacher into a good one, transform a low-performing school to a high performing one, or in and of itself improve student achievement. Focusing on technology to the exclusion of the core components of teaching and learning (curriculum, content, instruction, and assessment) has been repeatedly tried across the globe—and it has repeatedly failed. Therefore, successful technology initiatives must focus on the core components of teaching and learning—leadership at the national, regional, and school levels; reforming the curriculum to align with what we know about how students learn and the types of skills necessary to succeed in a highly competitive global economy; improvements in recruiting and hiring and paying qualified teachers and then continually improving their skills and holding them accountable to standards of professional behavior; using instructional practices that have been shown to help students master content; and aligning the assessment system with the instructional system.

Rabindra Nath Tagore has rightly said **"A teacher can never truly teach unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flame"**. Teachers should therefore continue to develop their knowledge, skills, understanding,interest and so on necessary for acquiring mastery over the subject or a particular area and competency in transmitting the same to the students. They have to improve their

expertise through all kinds of means, media and method. Their preparation should be actually continuous, multidimensional and multifaceted.

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