SIGNIFICANCE OF e-TOOLS IN DEVELOPING TECHNO-PEDAGOGICAL COMPETENCIES IN TEACHING- LEARNING PROCESS IN TEACHER-EDUCATION

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ABSTRACT

*"The role of educational technology in teaching is of great importance because of the use of information and communication technologies. At present, **Educational Technologists** are more busy to examine the teacher education programs in the light of Technology. And others have engaged themselves in different programs having focus on meta-teaching and process-oriented instructions that will provide students with deep learning experiences that will follow them into their future classrooms. Instruction takes place in an innovative online learning environment where 'Pre-service Teachers' explore technology, learn technical skills, evaluate the appropriateness of various technologies in their subject areas, and devise creative and meaningful approaches to incorporating technology into sound pedagogy. The major objective of '**Techno-pedagogical researches'** is on developing both the technological skills, the critical and reflective thinking skills necessary to continue using the most up-to-date technologies in the classrooms of Teacher Education at present. "Pedagogy describes the collected practices, processes, strategies, procedures, and methods of teaching and learning. It also includes knowledge about the aims of instruction, assessment, and student learning etc. In such a context, the terms "pleasure and pressure" should not get blurred. However, to conclude that when Teacher community want to use and realize that e-tools to be durable and that applications of such tools offer possibilities in education, we need a certain kind of quality standard. A strong link between innovation and quality is inevitably required. This paper gives an overview for the effective use of e-tools, for Teachers, Learners and Teacher- Educators indeed."*

Keywords:--Educational-technology, Instructional Design, Knowledge-Base for Teaching online-courses, Techno-Pedagogical issues, Techno-Pedagogical proficiencies, Techno-Pedagogical competencies, Preservice teachers, Skill-Development, Teacher Education Programs,Teaching Methods, eTools, Technological- literacy etc.

INTRODUCTION

As it is observed that the role of educational technology in teaching is of great importance because of the use of information and communication technology. In the light of present discussion, it is essential to go through basic- terms underlying or used in foregoing pages. Firstly**,** one should make clear oneself with the underlying meaning of the key terms and respective definitions indeed which are followed as:-

a)Technology:-- It encompasses modern technologies such as computer, Internet, digital video and commonplace technologies including overhead projectors, blackboards, and books.

b) Pedagogy :-- It describes the collected practices, processes, strategies, procedures, and methods of teaching and learning. It also includes knowledge about the aims of instruction, assessment, and student-learning

c) e-Tools :-eLearning authoring tools are a class of products designed for people who need to create online educational or training courses that are deployed from a standard, cloud-based learning management system such as Litmos.**d) Techno-Pedagogical Issues:--** Techno-pedagogy refers to electronically mediated courses that integrate sound pedagogic principles of teaching or learning with the use of technology. ... Investments and interactive technologies in education require both the technological and pedagogical skills to use the techno-pedagogical proficiencies will make teaching and learning a

pleasurable exercise as it would lessen the pressure on the teachers and enable the students to delve deeper into domain of knowledge.

e) Teaching - Learning Process:-A Combined process where an educator assesses learning needs, establishes specific learning objectives, develops teaching and learning strategies, implements plan of work and evaluates the outcomes of the instructions.

f) Techno-Pedagogical Proficiencies— Techno-pedagogical proficiencies refer to electronically mediated courses that integrate sound pedagogic principles of teaching or learning with the use of technology.In this regard,the message conveyed by the speakers at the University Grants Commission-supported national seminar on "Techno-pedagogical proficiencies--"**pleasure and pressure"** organized under the aegis of Department of Education of Annamalai University at Chidambaram on Monday. The speakers stated that the education system was now witnessing a paradigm shift from the traditional chalk-and-board teaching methodology to digitizing the pedagogical approach through technical devices.They opined that such a transformation would not only increase the capability of the teachers but would also widen the knowledge base of students so as make them competitive in the international arena that technology had made inroads into every sphere of human activity, including the field of education. It had totally transformed the face of didactic teaching and brought about far reaching changes in the way in which knowledge was being shared.

However, he cautioned that mindless dependence on gadgets would make teaching a dull and monotonous affair. As a surgeon he knew the significance of technology as it had made easier for students to understand the nature of diseases and health care services. When it came to teaching theories, the teachers should give up the mechanical approach and make it interesting by simulating problems and finding solutions to such imaginary issues.The **e-tools which are commonly used are Photocopier, Printer, Internet access, Broadband connection, Normal connection, Laptop, Internet access, Broadband connection, Normal connection, Scanner and Tablet, Data show projector, a desktop computer, a desktop computer connected to the internet, a laptop connected to the internet, Desktop computers for students, a desktop computer for students connected to the internet, An interactive whiteboard, a camcorder etc. As we know that technology encompasses modern technologies such as computer, Internet, digital video and commonplace technologies including overhead-projectors, blackboards, and ebooks.** Pedagogy describes the collected practices, processes, strategies, procedures, and methods of teaching and learning. It also includes knowledge about the aims of instruction, assessment, and student- learning

etc. In such a context, the terms "pleasure and pressure" should not get blurred and the distinction could be kept intact if the teachers with appropriate techno-pedagogical skills make teaching a "pleasurable" experience without feeling much of "pressure,"   (Ramanathan, 2012)

REVIEW OF RELATED LITERATURE:However this present paper is based on Techno- Pedagogical issues & concerns of Teacher Education. As for as nature of the research methodology is concerned, it is purely a Review based one to study eTools in Teacher Education as a Techno- Pedagogical concern for the purpose too.Therefore, an attempt is made to make study of related as well as relevant literature extensively to a desired extent. And the same has been discussed in the proceeding lines. According to Chidambaram,N., (2012), that integration of **techno-pedagogical proficiencies in** teaching had relegated the traditional form to the background. Education system is now spectator and a paradigm shift from the traditional chalk-and-talk teaching methodology to digitizing the pedagogical-approach through technical devices. It opines that such a transformation is not only increasing the potentiality of the teachers but also widening the information base of students so as make them competitive in the international arena. In today's world, most people need to keep on updating both their skills and knowledge to meet the challenges of everyday life. This has spurred new learning needs which exceed by far the formal courses, provided commonly by institutions, which allow targeting a general public. Instead, the needed trainings must be more informal in order to better address individual needs. The National Curriculum Framework (2005), stated that "ICT used for connecting children and teacher with scientific-working in universities and research institutions would also help in demystifying scientists and their work". However, research findings have shown that there exists socioeconomic , cultural, time and geographical barriers for people who wish to pursue higher education. Innovative use of Information and Communication Technology can potentially

solve this problem (Bhattacharya and Sharma, 2007). Report of the working group on higher education for the XII five year plan (2011), entitled that " Information and Communication Technology is a mission mode project to provide connectivity, valuable content and low cost computing devices to all the Institutions of higher learning in the country. A National Knowledge-Network will interconnect all universities, libraries, laboratories, hospitals and agricultural institutions for sharing data and computing resources across the country over a high-speed information network having gigabit capabilities. [In data communications, a gigabit is one billion bits, or 1,000,000,000 (that is, 109) bits]

SIGNIFICANCE OF THE USE OF TECHNO-PEDAGOGICAL COMPETENCIES & eTOOLS: A teacher with deep pedagogical knowledge understands how students construct knowledge and acquire skills and how they develop habits of mind and positive dispositions toward learning. Every teacher should know how to use technology, pedagogy and subject area content effectively in their daily classroom- teaching. It is clear that merely introducing technology to the educational-process is not enough. One must ensure technological integration since technology by itself will not lead to change. Rather, it is the way in which teachers integrate technology that has the potential to bring change in the educational process. For teachers to become fluent in the usage of educational technology means going beyond mere competence with the latest tools to develop an understanding of the complex web of relationships among users, technologies, practices, and tools. Teachers must understand their role in technologically-oriented classrooms.

As we know that knowledge about the technology is important in itself, but not as a separate. Today the techno-pedagogical competency is very much required for teachers in teaching and learning process, as it facilitates effective teaching and learning. The techno-pedagogical competency is nothing but the ability of the   teachers to   make   use of technology effectively in teaching. The teachers develop techno-pedagogical competencies then they may try to make use of this often in teaching and it will in return make the learning process simple, interesting, joyful and effective In techno-pedagogy, There are three areas of knowledge such as **content, pedagogy, and technology.** Content is the subject matter that is to be taught, while the Pedagogy is related to methodology of content,-delivery whereas technology is only those techniques by which that content is desired to be disseminated in more precise terms.

CONCLUSION:--

To conclude**,** it must be made realistic that while

 considering e-tools, we often think too much of innovative applications whether they can or have a direct implementation in education or not. Often, e-tools are seen as novelties, people are enthusiastic about them or not, and some try as applying them as a separate tool or subsequently change from an already familiar tool to a new tool. However, when we want e-tools to be durable and that applications of such tools offer possibilities in education, we need a certain kind of quality standard. A strong link between innovation and quality is inevitably needed. This paper gives an overview for the effective use of e-tools, for Teachers, Learners ,prospective-teachers i.e. pupil teachers and Teacher-Educators also. Additionally, to this research, several suggestions are needed to be formulated for the development of a pedagogical-didactical i.e. morality- concerns or quality measures indeed are also required for the effective use of e-tools.

Last but not the least, it is concluded that Techno-Pedagogical concerns in education ,teacher- education have an important place to make the teaching learning process more lucid, effective, worthy, interesting, enhancing   quality   concerns   too.

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4) Bhattacharya and Sharma, (2007). **Report of the working group on higher education** for the XII five year plan (2011), entitled   **Information and Communication Technology** is a mission mode project.

5) **National Curriculum Framework** (NCF 2005) is one of the four National Curriculum Frameworks published in 2005, NCERT, N.Delhi

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