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ICT as a Catalyst for Pedagogical Innovation: A Review Study

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ABSTRACT

ICT stands for Information and Communication Technology and is outlined as a various set of technological tools and resources accustomed to communicating, and to make, publicize, store, and manage data. It is the kinds the method of teaching-learning and analysis though additional gripping, simple to understanding and every one comprising with a quicker presentation The use of ICT as pedagogy is to serve higher education to the entire world which gives prime quality education with high facilities to the learners so they become able to vie with the opposite pupils everywhere the world. The objective of this study is to explore the inevitability of ICT integrated pedagogy in the classroom. The study is descriptive in nature and thus the data presented relies on secondary sources. The use of ICT can enhance the exercise experiences of scholars. It additionally helps for building in career, in a very technology know-how world.

ICT as a Catalyst for Pedagogical Innovation: A Review Study

Technology use in education has become additional common in recent fundamental measures. Information and Communication Technologies (ICT) area unit those technologies that area unit used for assortment, storing process, researching, transfer and unloading of knowledge directed to teaching, learning activities it includes all hardware and package, computers, the net, and electronic delivery systems like radios, televisions, and projectors encircled by others and is widely used as pedagogy in contemporary world periods. Ancient Teaching-learning designs area unit was less effective and unsuitable in the twenty-first century (Shah, 2016). ICT tools began to be utilized in instructional sectors within the early 1989s, and lots of students and researchers refer to ICT are a vital part of education for next-generation ((Cukur, 2023; Yelland, 2001). We can modification the teacher-targeted teaching-learning activities into student-targeted and self-learning activities by mistreatment ICT tools. ICT has become one of all the elementary structures of up-to-date society. several countries currently concern accepted ICT and become accomplished at the fundamental skills and ideas of ICT as a part of the elemental of education. Learning isn't restricted solely to what has been drained teaching area. however, it should result in promoting technology for the advance of education for all points of the social order. Technology kinds the training state of affairs additional engaging and pertinent. the foremost necessary customary in teaching/ learning procedure is discovery some logical skills, self-guidance, verify learning, providing of dynamic and deal learning method, affiliation in learning method, partnership in information creation, project-based instructional actions (Ebrahim, 2002). Technological development is incredibly important for everywhere human progress during this clever world, particularly in instructional space. It is the kinds the method of teaching-learning and analysis though additional gripping, simple to understanding and every one comprising with a quicker presentation (Panda et al., 2025). Government conjointly encourages ICT primarily based

learning tools from primary level to higher-level courses for chiefly sound information and increasing proficiency in their specific field. ICT integrated teaching, learning activities is helpful to advance thoughtful of applied information. The use of ICT as pedagogy is to serve higher education to the entire world which gives prime quality education with high facilities to the learners so they become able to vie with the opposite pupils everywhere the globe (Patel & Patel, 2017). It enriches the competency of academics developing expression command and advance the training capability. The worldwide integration of ICT into teaching-learning has advanced meaningfully over the last 20 years. ICT has modified the standard of education, and pupils currently expect ICT as a part of their learning expertise. ICT eliminates time barriers in the teaching-learning method. It conjointly eliminates geographical barriers as learners will go surfing from anywhere (UNESCO, 2002). Researches showed that ICT integrated teaching methods have important roles in enabling the development of learners' essential thinking, drawback resolution, and higher cognitive process skills (Rice & Wilson, 1999). Social studies academics should teach with and regarding the most recent technology to present their students the information, skills, and attitudes needed to be ready to adopt the workplace of national (National Council for the Social Studies [NCSS], 2013). In the Nepalese context, with the aims of providing necessary skills on data and Communication Technology to the scholars furthermore as mistreatment data and Communication Technology as a very important tool to boost schoolroom delivery the Ministry of Education had a ready plan on data and Communication Technology in Education (2013- 2017). the most focus of this set up effectively integrated ICT in teaching and learning method across all education sub-sectors so access to education is enlarged, quality of education are improved and equity is supported. This plan conjointly embraces teaching as a sub-sector to implement ICT. ICT integrated pedagogy enhances the teaching-learning setting in the social science schoolroom but their area unit challenges to use such

pedagogy. alternative standard teaching pedagogies besides ICT integrated pedagogy area unit less effective in teaching-learning method. It facilitates and supplies a favorable likelihood to find out the subject`s content. It stimulates interaction between academics and students in the social science schoolroom. It provides broad information of material to students. I believe that academics conjointly feel easiness to gather teaching material during this methodology. it's necessary to know however social science teachers understand ICT-integrated social science teaching-learning setting. it's necessary to search out teacher's perceptions regarding ICT-using pedagogy and its utility in social science schoolroom practices as a result of teacher's perception extremely modified their perspective to use ICT. Effectively follow the rising pedagogy for the convenience of scholars depends on the command of academics and their competency in mistreatment technology. However, lack of coaching and support use of technology becomes a difficult task. This task becomes troublesome while not the support of regarding authorities. Some folks same this pedagogy to deteriorate the ability of scholars however I argue their voice. ICT has been across as a cross-cutting tool that plays a significant role in inability, interaction, and collaboration in teaching and learning (Tekos & Solomonidou, 2009). during this context, there's got to establish what methods will we tend to apply to boost ICT change pedagogy for the significant social science classroom? however, will we tend to empower the teacher to effectively apply ICT-connected pedagogy in the social science classroom? therefore I impelled to pick out this subject for the study. Most of the studies emphasized exploring the present state of affairs of ICT-enables pedagogy and challenges to use ICT in teaching-learning activities within the social science schoolroom. These studies centered on the importance of ICT integrated pedagogy for higher teaching-learning activities within the schoolroom. but these studies set a neutral position why the social science teacher area unit unable to use ICT integrated pedagogy. Tribhuvan University has been running a course of ICT.Ed in B.Ed. and M.Ed.

level to develop the ICT friendly teacher, teacher educators, instructional planners, program specialist and commenced the net facility in campuses however impact of ICT friendly setting isn't produced in however in alternative subject`s teaching-learning practices. Even most of the social science teacher at the school level don't skills to mix ICT tools in teaching-learning method, even United Nations agency area unit aware in ICT integrated pedagogy are unable to use this due to the deficiency of prerequisites. So, I was motivated to select this topic for the study. The objective of this study is to explore the importance of ICT integrated pedagogy in the classroom. The objective of the research is an ongoing process of correcting and refining hypotheses that should lead to the acceptance of certain scientific truths (Martyn, 2008) it aims to investigate the inevitability of ICT integrated pedagogy in the classroom.

Significance of the study

The pedagogical practices are being facilitated by modern means of communication and technologies. The significance of ICT has been realized for promoting meaningful learning.

However, fewer academic studies are exploring key barriers for integrating these technology-based teaching and learning activities in the Nepalese context. Therefore, this study explored the experiences of teachers on the use of ICT-based pedagogy in economics teaching, and key barriers/challenges faced by teachers to promote ICT –based pedagogy. This study is likely to fulfill the dearth of empirical evidence for strengthening ICT integrated teaching and learning activities in economics classroom practices.

Information and Communication Technology (ICT)

Information and Communication Technology (ICT) is the broader term, which represents all the communication technologies such as the internet, e-mail, wireless networks, phones, satellite communications, computers, CDs, hardware, and software. It also includes the equipment and services associated with these technologies, which provide access to

information according to United Nations Educational, Scientific and Cultural Organization (UNESCO, 2006). ICT is considered a powerful tool for educational change and reform (Fu, 2013). However, the integration of ICT in education has no long history. It was introduced at the school level from around the early 1980s (Pelgrum & Law, 2003). to serve as a means of improving efficiency in the educational processes. Integration of ICT concepts and skills is essential not only as part of the core education, rather they are equally crucial to promote meaningful teaching and learning (Daniels, 2002).

However, (Mingaine, 2013)) explains that the success of the integration of new technologies into the classroom varies from curriculum to curriculum, place to place, class to class, availability of updated hardware and software, and facilities of infrastructure to run smoothly in the regular time. Due to lack of ICT resources and proper infrastructure lack of teachers' Technological Pedagogical and Content Knowledge (TPACK), and lack of government vision, ICT tools in the classroom might not be effective.

Research Methodology and Design

The methodology is the broad term used to refer to the research design, methods, approaches, and procedures used in an investigation that is well panned to find out something (Keeves, 1997). This study followed the Interpretivitism research paradigm and based on multiple realities and multiple mental social constructions so it followed qualitative research design. In the context of education, this means that understanding the use of ICT needs an exploration of diverse perceptions, meaning, and experiences of individual involved. The epistemological orientation of this study is based on the premise that knowledgeis generated through the interpretation of these multiple mentally constructed realities.The study is descriptive in nature and thus the data bestowed relies on secondary knowledge. Secondary data has been collected from a diverse range of existing literatures and documents, including scholarly books, newsletters, academic journals, official reports, and professional

publications pll as from existing literature to grasp the uses of ICTs for providing numerous levels of education within the literature. Scholarly books provided theoretical framework and historical context, academic journal offered current research findings and trends, official reports and documents from educational and governmental bodies, provides policy-level insights and finally professional publications provided practical application of ICT in pedagogical context. This meticulous process of data collection and synthesis was designed to provide a comprehensive and nuanced understanding of how ICTs are being used to facilitate teaching-learning process across school and university level.

Result and Discussion

The use of ICT is creating major differences within the learning of scholars and teaching approaches (Kilag et al., 2023). Colleges within the Western World invested masses for ICT infrastructures over the last twenty years, and students use computers additional typically and for a way a larger variety of applications (Schulz-Zander, Büchter, & Dalmer, 2002). Many studies reveal that students using ICT facilities principally show higher learning gains than people who don't use them. Students UN agency used technology tutorials in mathematics, science, and social science score considerably higher on tests in these subjects. Students who used simulation software packages in science additionally scored higher(Noor-Ul-Amin, 2013). The findings additionally indicated that grade school students who used tutorial software packages in reading scored considerably higher on reading scores. young students UN agency used computers to write down their own stories scored considerably higher on measures of reading ability(Cronk, 2016).

Moreover, students UN agency used word processors or otherwise used the computer for writing scored higher on measures of writing ability. Furthermore, the employment of ICTs in education also shifts the training approaches. There's a typical belief that the employment of CTs in education contributes to additional artist learning and a rise in activity

and greater responsibility of scholars. This limits the role of the teacher to supporting, advising, and training students instead of merely sending data (Bhattacharjee & Deb, 2016). The gradual progress in the victimization of computers changes from learning regarding computers, to learning computers, and at last to learning with computers (Giri & Dhakal, 2017). Concerning introducing ICT technologies in schools.

As a modification agent, technology is capable of changing the content, strategies, and overall quality and amount of teaching and learning, thereby reducing teacher's work and making certain inquiry-oriented schoolroom. Moreover, ICT a central force in economic and social shifts that has technology talent essential to the future employment of today's students. The role of technology in teaching and learning is quickly turning into one of the foremost necessary and wide mentioned problems in modern education policy, if ICT is correctly used; it holds nice promise to boost teaching and learning additionally to shaping manpower opportunities. The utilization of ICT for teacher coaching has been recognized by the governments of Nepal (Ministry of Communication and Information Technology, 2019; Ministry of Education, 2016; Ministry of Education Science and Technology, 2022; Ministry of Science and Technology, 2000). Broadening the provision of quality education materials in the Asian nation, many initiatives area unit current for creating digital repositories and learning objects (Wakhungu & Benjamin, 2013).

Conclusion

Information communication technologies area unit influencing all aspects of life, during which the impacts of ICT are significant is education. ICTs facilitate expand access to education, inspire to be told, facilitates the acquisition of basic skills, and might remodel the training surroundings to facilitate raising the standard of education. ICT has tremendous potential for education. ICT allows instructors to succeed out wide with efficiency and effectiveness. It helps teachers and establishments to be a lot trendy and dynamic. Eventually,

the employment of ICT can enhance the training experiences of scholars. It additionally helps for building in career, in a very technology know-how world.

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