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THE ROLE OF ICT IN TEACHER EDUCATION AND ITS IMPACT ON MODERN LEARNING

Information and Communication Technologies (ICTs) have emerged as transformative tools in education, playing a pivotal role in bridging the gap between traditional and modern learning paradigms. Defined as technologies that facilitate the handling and communication of information, ICTs include the internet, wireless networks, and a variety of digital tools, enhancing teaching and learning processes. In teacher education, their integration holds the potential to revolutionize pedagogical approaches and improve educational outcomes.

The application of ICTs in teacher training aligns with UNESCO's definition of ICT as a scientific and technological discipline linked to social, economic, and cultural developments. Teachers, as central figures in education, have a profound impact on societal progress. Effective teacher education programs incorporating ICT not only improve instructional quality but also prepare educators to foster creativity, critical thinking, and problem-solving skills in learners. This equips students to excel in diverse roles, from social leaders to innovators [1].

The rapid technological advancements in the modern era necessitate a restructuring of teacher education programs. These programs must address the integration of ICT to meet the evolving demands of society. ICTs, such as e-learning platforms, web-based resources, and telecommunication tools, provide flexible, accessible, and interactive environments for both educators and students. By enabling personalized learning experiences, ICTs adapt to individual needs and facilitate lifelong learning. For instance, blended learning combines traditional classroom interactions with online modules, creating a holistic educational framework.

The constructivist paradigm, which underpins learner-centered environments, is particularly compatible with ICT-based approaches. This model emphasizes active engagement, allowing students to construct knowledge through prior experiences and digital resources. Teachers trained in ICT competencies are better equipped to foster such environments, leveraging tools like e-portfolios, digital libraries, and online simulations [1].

However, the integration of ICT in teacher education is not without challenges. The digital divide, lack of infrastructure, and insufficient teacher training often hinder effective implementation. Addressing these issues requires strategic planning, investment in resources, and a focus on culturally relevant digital content. Teacher educators must also understand the dynamics of technological adoption, from societal implications to the stages of teacher development.

ICTs have the capacity to transform teacher education by enhancing

collaboration, fostering innovation, and building global teaching communities. Their inclusion in training programs ensures that educators are well-equipped to meet the needs of 21st-century learners. By addressing challenges and prioritizing the integration of ICT, institutions can pave the way for an adaptive and inclusive educational future.

References

1. Ratheeswari K. Information Communication Technology in Education. *Journal of Applied and Advanced Research*. 2018. 3(S1):45.

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HARNESSING AUGMENTED REALITY FOR ENHANCED LEARNING EXPERIENCES IN EDUCATION

Augmented reality (AR) is changing how students learn by making education more engaging and interactive. With AR, students can visualize complex concepts, interact with virtual objects, and explore ideas in ways that traditional methods cannot offer. For example, medical students use AR to practice surgery in safe, virtual environments, while design students use it to build and view 3D prototypes. In higher education, AR has shown promise in increasing student participation, improving understanding, and sparking creativity. Despite these benefits, AR is not yet widely used in higher education, and there is still much to learn about its impact on teaching, learning, and institutional practices.

While AR is known to enhance engagement and learning, there is limited research on how it can support creativity and critical thinking in higher education. Current studies often focus on the technical aspects of AR or its short-term effects in classrooms. Few researchers have explored how AR could create learning environments that encourage students to think creatively or solve problems in innovative ways. This is an important gap because creativity is increasingly seen as a key skill for success in today’s world . There is also little understanding of how AR can help higher education institutions innovate and align with modern education policies.

This study explores how augmented reality can create interactive learning environments that promote creativity and critical thinking in higher education. It examines how AR can help institutions adopt new teaching methods and align with policies that encourage innovation. By focusing on AR’s role in fostering immersive and hands-on learning, this study aims to connect its practical uses with broader educational goals.

This study uses a qualitative approach to investigate AR’s role in higher education. Interviews will be conducted with educators, students, and policymakers