

Information And Communication Technology in Classroom Instruction

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Abstract

Information and Communication Technology has paved the way for accelerating the paradigm shift in promoting flexible learning environment to meet individual learning objectives of the subject-matter content. Therefore, the aim of this study is to adopt ICT in classroom instruction, so that the student teachers can learn to practice various ICT skills and its benefits through effective use of this technology.

Introduction

In confronting many challenges that the future holds in store, humankind sees in education an indispensable asset in its attempts to attain the idea of peace, freedom and social justice. Education is not a miracle cure or magic formula opening a door to a world in which all ideals will be attained, but is one of the principal means available to foster deeper and more harmonious form of human development and thereby reduce poverty, exclusion, ignorance, oppression and war (UNESCO-1996). In context of global policy, global society and global economy, quality concerns in education are national priorities for all nations. Education is increasingly recognized to be at the heart of development process. It is the most powerful weapon which we can use to change the world. Social, intellectual, moral, economic and political developments are not possible without education. The level of education of citizens' plays an important role in strengthening the social, economic and technological fabric of a nation.

The quality of education depends to a great extent on the quality of teachers. It is a known fact that quality teachers opt for an innovation in their teaching aspect through integrating technology in the classroom instruction to give the best to student-teachers. Since technology is a powerful tool for problem-solving, conceptual development and critical thinking help to make the learning process much easier for the student-teachers.

Nowadays, educational systems are under great pressure to adopt innovative methodologies and to integrate Information and Communication Technologies in the teaching and learning process, to prepare students with the knowledge and skills they need in the 21st century. Apparently, teaching profession is evolving from an emphasis on teacher-centered, lecture-based instructions to student-centered interactive learning environments. Today learning is approached as a constructive, self-regulated and cooperative to meet the individual difference and technology-oriented process. Therefore, the educational institutions should undertake innovative programs for teacher-educators to update and upgrade their teaching competencies to facilitate the teaching process effectively.

ICT in Teacher Education

Teacher Education is struggling to provide their students with necessary knowledge, skills and valued system and to prepare good citizens for lifelong learning due to environmental changes. To meet these challenges, Teacher Education has to focus concurrently on expanding access, improving internal efficiency, promoting teaching-learning and improving classroom processes through the new emerging ICT. It facilitates the educational transaction between providers and users by keeping students well informed about the courses, enhancing teacher-student relationship through e-mail, chat sessions, online learning, discussion forum, blogs etc, enhancing active learning, sharing ideas, providing immediate feedback, encouraging paced learning and allowing for effective mapping of learning pathways. It also helps the teacher-

educator to develop or improve their lesson plans and also to find free animation and simulation to enliven their lessons.

Benefits of ICT

There are enormous benefits from the usage of ICT in classroom instruction. The benefits of ICT features in classroom instruction are summarized below:

- Enhanced learning experience: ICT provides access to diverse learning materials like videos, simulations and interactive tools, catering to different learning styles and promoting deeper understanding.
- Paves way for personality development
- Active participation of student
- Better learning, retention and student performance
- Multi-sensory learning experience
- Continuous professional development: online training programs, webinars and digital resources help teachers stay updated with the latest teaching methodologies and technologies.

Impact on Teachers and Teaching Methodology

Using ICT in the classroom instruction, teacher educators would have enormous positive impact on different aspects which are listed below.

- Teachers become multi-facilitators
- Teachers can automate administrative tasks like grading, attendance and communication, freeing up teacher's time to focus on lesson plan and prepare lessons more efficiently and more effectively.

- Teachers can use data analytics from educational software to gain insights into student performance, identify learning gaps and tailor their instruction accordingly.
- It helps to promote interdisciplinary approach
- Develop effective teaching tools and designing of the modules. All the above aspects would help in teaching the content and enrich their teaching profession.

Effective use of Information and Communication Technology in education can have a significant impact on teaching and learning. Four phases are conducted to implement ICT content in Teacher Education program so that the student-teachers when they become teachers in school would be able to utilize ICT tools in classroom instruction in promoting flexible learning environment to meet individual learning objectives of the subject-matter content. The four phases are : a) ICT literacy b) Effective and efficient use of ICT hardware and software for teaching-learning activities c) ICT-based pedagogy, online support, networking and d) Adopting best innovative practices in the use of ICT. ICT integrated teaching helps a teacher to discharge his/her duty effectively.

Conclusion

The teacher education system empowered by ICT- driven infrastructure can have a great opportunity to come up to the center stage and ensure academic excellence, quality instruction and leadership in a knowledge-based society. ICT has revolutionized the entire concept of education, learning and research by offering new opportunities and challenges in creation and dissemination of information.

Transition, Transformation and Revolution is the scenario of today's educational system. The teachers now have to learn how to cope with computers in their classrooms, how to compete with students in accessing the enormous body of information- particularly via the Internet and how to use the hardware and software to enhance the teaching/learning process. The integration

of Information and Communication Technology in classroom instruction has the potential to revolutionize the way we teach and learn. By leveraging ICT tools and resources, educators can create engaging, interactive, and personalized learning experiences that cater to the diverse needs of the students. The teachers have to realize that if the students are to achieve a high level of competency and competitiveness, they have no other choice, but to adopt technology as an integrated tool in the field of education.

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