

ENHANCING NURSING EDUCATION THROUGH DIGITAL TOOLS

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Abstract. This article explores the importance of using technology tools in teaching nurses and discusses their role in enhancing clinical competence, learner engagement and professional readiness for future clinical work. The study focuses on how technology-based learning supports problem-based, communication approach and contribution to the development of digital competence. The findings suggest that the integration of smart technologies into nursing education can improve the quality and effectiveness of nursing training and better prepare them for modern healthcare practice.

Key words: smart technology, nursing education, simulation-based learning, problem-based learning, digital competence, healthcare training

Introduction. The rapid development of technology and education has significantly changed healthcare system worldwide, promoting new demands and chances in nursing education. As it is evident in today's modern educational system, traditional teaching methods no longer meet learners and professionals' needs and interests to prepare them for complex clinical environments that require advanced skill not only in their field but also technical, critical and decision making skills. Digital tools such as simulation-based learning, virtual reality, mobile applications and artificial intelligence provide innovative methods to teaching and learning in nursing education. Since nursing education plays a crucial role in preparing high qualified healthcare professionals, it has become increasingly important to teach nursing students with up-to-date and modern teaching methods. Due to technological advancements, an aging population and rising patient safety standards, it has become complex working in healthcare system with traditional and outdated knowledge and practice. To progress this field of medicine, new technology tools, medical instruments and robotics has been implemented in developed countries and these advancements will come to our country very soon which encourage nurses to gain enough technical and modern knowledge in their field to gain a professional development.

The combination of smart technologies into nursing training has been promoted as a response to these challenges and requirements. Smart technologies include digital and intelligent tools that improve teaching, learning and clinical training through interactive, adaptive and engaging environment. In nursing education, these technologies include mobile applications, electronic learning platforms and artificial intelligence-based tools to use video instructions, Power points and learn international advances in nursing field.

Digital educational technologies (DET) are increasingly used in health courses, cooperating to the diversification and flexibility of activities, and allowing for a student to get access to content in real time and wherever they want, in addition to providing opportunities for the interaction among students outside of the physical space of the classroom [2; 49-136]. It opens the doors of international collaboration and showing themselves in global stages with chances of distance learning and working, exploring up-to-date original materials and independence in choosing learning style.

Another notable essential side of the technology-based teaching was seen during the period of pandemic when all work places and studies were run by online platforms not to stop the working process. Despite the unprecedented obstacles created by the COVID-19 pandemic,

nursing professional development practitioners and nurse educators successfully harnessed educational technology to disseminate an extraordinary amount of vital information needed to provide care to a society in crisis [3; 38]. It demonstrates that in today's vast changing world, each professional should be ready to different conditions and gain enough knowledge both in their field and technology to keep balance.

After gaining independence of Uzbekistan, a number of documentations and legislations have been implemented to increase the quality of education and healthcare field, particularly in patient care system. According to the Decree of the President of Uzbekistan I.A.Karimov "On measures to further improve of foreign language learning system", a great deal of reforms has been done in all field of society to improve people's life [1]. Teaching and learning process in medicine have gained more attention as new and unknown forms of diseases and infections have been threatening the world which demands high quality of training for medical professionals. All above mentioned factors promote the implementation of technology based teaching module for nursing training to meet both society's and international demands and standards.

Methodology. In this regard, to improve current teaching process of nursing education in Karakalpakstan, we have learned the current situation in Aral Sea Region Medicine and Transport Technical College at Nursing Training department. For this survey, we have conducted observation and oral questionnaire methods of collecting data which explores the attitude of students and teachers to use technology tools in nursing lessons and obstacles disabling them to utilize digital tools. During this research, we have identified that students prefer to learn nursing procedures and clinical cases via different authentic technology-based materials such as videos, Google web sites for patient care procedure, quizzes and online games like Duo Lingo, Quiz test and www.onlinelibrary.com online applications and web pages to evaluate their knowledge and presentation visual materials to identify global trends in medicine. Based on their responses, it has become evident that most of their lessons are taught by text books and power point demonstrations while they expect to learn more by digital tools as they have such opportunities to use every-day lessons. This advancement can encourage them to actively participate to lessons and explore more new information in their field.

Besides them, some teachers claimed limited IT competence and scarcity of training on utilizing educational modern technologies for pedagogical purposes.

Another significant issue observed during our survey was a time constrain. According to teachers' responses preparing technology-based lessons requires a great deal of time for searching authentic, appropriate materials, designing interactive tasks and lessons plans for a new form of lessons. Despite these difficulties, most educators expressed a positive attitude towards transforming traditional methods of teaching into technology-enhanced simulation based interactive methods and modernize teaching process if institutional support and those obstacles are solved precisely.

Discussion. The findings of the study agree with the previous researches indicating that educational digital tools improve learning process with promoting motivation and engagement amid nursing students. As explored by Lahti et al, e-learning and technology-based instruction positively affect learners' knowledge, skills and satisfaction.

In regard to nursing education in Karakalpakstan, the gradual implementation of smart technologies can remarkably enhance the quality of learning. While, integration of technologies requires not only utilizing technological devices but also institutional support, IT training for teachers and redesign of curriculum to overcome above mentioned challenges by students and teachers. It does not mean that technology entirely replace traditional teaching which is

impossible until full implementation of resources, but rather complement them to create a blended and students-centered learning environment.

Conclusion. Based on the classroom observation and interviews with teachers it has become evident that the integration of technology into both theoretical and practical lessons plays a vital role in improving the quality, effectiveness and relevance of professional training and modernization of current educational system. In today's high competitive and dynamic world, digital tools not only develop professional competences, critical thinking and communication skills but also readiness for real healthcare practice. The outcomes of the study show that both learners and teachers presented their positive attitude towards technology-based learning, in spite of existing challenges such as limited resources and digital skills which can be tackled in a short period with institutional support.

To meet international standards, modern healthcare and learners' demands, nursing educational places should focus on the development of digital infrastructure, provide opportunities for continuous professional development for educators and encourage the use of modern innovative teaching methods. These advancements in education will not only modernize nursing training but also contribute to the preparation of competent, adaptable and technologically literate medical professionals.

Recommendation. Based on the information gathered during the research we can recommend that nursing education institutions should gradually integrate smart technologies, including simulation-based learning, virtual platforms and mobile applications into curriculum to reach high effectiveness of study and step the next new period of education process.

Further research should be conducted to evaluate the long-term impact of smart technologies on nursing students' clinical performance and professional progress.

References

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