

Breaking Boundaries: Innovative Educational Environments in Medicine

M. M. Rustamov, Q. X. Anorboyev, E. A. Mamajonova, M. E. Abdullayeva and F. A. Fozilov
Andijan State Medical Institute, Andijan, Uzbekistan

Keywords: Innovation, Medical Education, Healthcare Professionals, Curriculum Design, Learning Environments

Abstract: Innovation in medical education is crucial to prepare healthcare professionals for the changing demands of patients and society. This article delves into the significance of establishing an innovative educational atmosphere within medical higher education institutions and suggests strategies to encourage innovation in curriculum design, teaching methods, assessment techniques, and learning environments. Drawing upon educational theory, cognitive science, and exemplary practices in medical education, this article provides practical guidance for educators and administrators aiming to nurture innovation and flexibility in medical education.

1 INTRODUCTION

Innovative educational environment as a set of innovations introduced in an educational institution, through which professional activities of teachers are carried out, an innovative educational environment is a set of educational content, forms, methods, and tools aimed at forming an innovative personality of students, based on the implementation of modern scientific and technical achievements in the educational process of a higher educational institution and capable of making creative decisions in the professional sphere. The use of innovative pedagogical models: 1. Using innovative educational technologies to transform traditional didactic models into innovational models. 2. Individualization of educational processes on the basis of digital technologies, development of distance education services, extensive implementation in practice of the "flipped classroom" model of webinar, online, blended learning technology. Identifying innovation in medical education settings and identifying its importance in addressing emerging health problems (Kim et al 2015, Leng et al 2001, Monaha et al 2008). This article also explores the barriers to innovation in medical education and strategies to overcome them. Learning innovative teaching methodology is problem-based learning, turn-based classes, and simulation-based learning. The advantages of active educational approaches in the development of critical

thinking, clinical problem-solving, and effective learning skills in medical education are highlighted, implementation of innovative assessment practices that measure not only knowledge acquisition but also clinical competence and professionalism are established as important tasks of today.

2 RESEARCH METHODOLOGY

In recent years, a systematic approach to process research has been playing an important role in the field of pedagogy. This is because the systematic approach makes it possible to adequately expand the level of scientific knowledge, achieve a large-scale synthesis of scientific knowledge, and form a holistic picture of the phenomenon and objects under study. This can be achieved by applying logical and methodological tools applied to a particular research object in different areas of science. To improve the existing educational environment in the medical higher educational institution, an assessment of needs was carried out to identify gaps and directions. Surveys, experimental groups, and data analysis have been used to collect data from various stakeholders and assess their needs and preferences. The questionnaire is designed to learn about the participants' use of technologies based on innovative educational technologies in teaching and learning.

Table 1: Effects of Experimental Conditions on Group Outcomes.

Score	Experimental groups				Control groups			
	At the beginning of the experiment	%	At the end of the experiment	%	At the beginning of the experiment	%	At the end of the experiment	%
5	15	20	20	26,7	12	16	14	18,7
4	30	40	40	53,3	38	50,7	40	53,3
3	20	26,7	15	20	15	20	12	16
2	10	23,3	0	0	10	13,3	9	12
Total:	75	100	75	100	75	100	75	100

3 RESULT AND DISCUSSION

When conducting the study, three main assessment criteria were used when assessing the knowledge of students. First, the development of motivational competencies. The realization of the need for the development of professional competence as a component of readiness for work activity of the future medical specialist, the readiness to show competencies that are formed in the process of work, the need for the independent development of competencies in the field of their profession. Secondly, the degree of development of cognitive competencies. Next, the degree of development of competencies in reflexive and cognitive intuition has been determined. The results of the general assessment of students by the groups in which the experiment was conducted.

On the basis of the data presented in the table, it is possible to come to the following huloosa and can be isochated as follows. So, $(100\% - 92\%) = 8\%$ the data from the experiment shows that the average acquisition in the experimental group has increased by 8%, as can be seen from the acquisition rate in the control group. From this it can be concluded that it can be seen that the indicator of the experimental group increased by 8% compared to that of the control group.

Innovative educational methods have led to an increase in the efficiency of mastering the average strength of student knowledge by an average of 8%. One of the main reasons for the increase in the strength of student knowledge in experimental test groups can be considered as the result of the activation of the circle of knowledge in students due to the use in education of electronic versions, whose

didactic, methodological, and technical characteristics were improved from innovative educational methods based on digital technologies of distance learning. In the innovative educational environment, the organization of lesson processes assumes the study of the distance learning environment, the creation of Integrated Information and educational resources as a factor enhancing the quality of education in individualization. In such an environment, we consider it necessary to carry out the following scientific and methodological tasks aimed at further improving the quality of teaching students: to achieve the use of individualization methods based on digital technologies in higher education institutions; development of electronic educational and methodological support and methodology for its use, which allows the use of digital technologies in the process of distance learning in the higher education system; development and implementation of a web system that serves to form the skills of Educators of distance education directions and the use of digital technologies in students.

4 CONCLUSION

In conclusion, creating innovative educational methods in medical higher education institutions is essential for preparing future healthcare professionals to thrive in a rapidly evolving healthcare landscape. By embracing technology, active learning approaches, interdisciplinary collaboration, and faculty development, institutions can foster a culture of innovation that enhances student learning outcomes, improves patient care, and drives positive change in healthcare delivery. Summarizing the key

components of the framework for creating innovative educational environments in medical higher education institutions and outlining future directions for research and practice. This section underscores the transformative potential of innovation in medical education for advancing healthcare outcomes and improving patient care.

ACKNOWLEDGMENT

The authors thank the official representatives of the Andijan State Medical Institute for creating the necessary conditions for the implementation of this research work.

REFERENCES

- Michael G.M. (2018). Theory of Transactional Distance. In Handbook of Distance Education. Routledge Handbooks Online, 31-46.
- Zainuddin, Z., & Attaran, M. (2016). Malaysian Students' Perceptions of Flipped classroom: A Case Study. *Innovations in Education and Teaching International*, 53(6), 660-670.
- Kim, J., & Park, S. (2015). Using virtual research tools to support student learning in the 21st-century classroom. *International Journal of Information and Education Technology*, 5(3), 199-203.
- Monaha, T., McArdle, G., & Bertolotto, M. (2008). Virtual Reality for Collaborative E-learning. *Computers and Education*, 50, 1339-1353.
- Leng, J. (2001). Scientific Examples of Virtual Reality and Visualization Applications. UKHEC – UKHigh Performance Computing, March, 1-9.
- Rustamov, M. M. (2023). Enhance students' knowledge and skills with multimedia tools in an innovative educational environment. *Science and Innovation International Scientific Journal*, 2(10), 43.