

METHODOLOGY OF DEVELOPMENT OF COMPETENCE OF FUTURE PEDAGOGUES IN THE USE OF DIGITAL TECHNOLOGIES

Zohidova Makhfuza Khabibovna

Kokand DPI, Teacher

ABSTRACT

The integration of digital technologies into education has changed the landscape of teaching and learning and has necessitated the upgrading of educators' skills in the effective use of these tools. This article presents a comprehensive methodology for developing future educators' digital technology competence. The methodology includes a holistic approach that combines theoretical foundations, practical training and continuous professional development. The proposed methodology is aimed at equipping future pedagogues with the necessary knowledge, skills and attitudes for effective use of digital technologies in educational institutions.

Keywords: Educational technology, sequencing, needs, methodology, technology.

INTRODUCTION

The rapid development of digital technologies has revolutionized various aspects of society, including education. The integration of digital tools and platforms in the classroom has the potential to enhance the learning experience, increase student engagement, and facilitate personalized learning. However, in order to take full advantage of the potential of these technologies, it is necessary to ensure that future educators have the necessary skills to use them. This article presents a methodology for the systematic development of future educators' competencies in the effective use of digital technologies.

Theoretical foundations:

The methodology begins with a strong theoretical framework that emphasizes the integration of pedagogical principles with digital technology. Future pedagogues will get acquainted with the conceptual foundations of educational technology, educational design and digital pedagogy. They will gain an understanding of how digital technologies can support diverse learning styles, encourage active learning, and foster collaborative and interactive learning environments. The theoretical basis of the methodology for developing the competence of future educators in the use of digital technologies is crucial for a solid understanding of the principles and concepts that ensure effective integration. By grounding prospective educators in these theoretical frameworks, they can make informed decisions about the selection and application of digital tools and strategies in their teaching practice. Some of the main theoretical foundations that form the basis of the methodology are:

Educational technology refers to the study and practice of using technological resources to improve teaching and learning. Future pedagogues study the theoretical foundations of educational technology, including its historical development, current trends, and future directions. They learn about the capabilities and limitations of different technologies and how to effectively integrate them into different educational contexts. Instructional design focuses

on the systematic planning, development, and implementation of effective instructional materials and strategies. Future educators will gain an understanding of instructional design principles such as needs analysis, goal setting, content sequencing, and evaluation. They learn to design technology-enhanced learning experiences that align with educational goals and meet the needs of diverse learners. Educational theories provide an understanding of how students acquire knowledge and skills. Prospective educators study well-known educational theories such as behaviorism, cognitivism, constructivism, and connectivism. They understand how technology can support these theories and improve learning outcomes. For example, they learn how to use digital technologies to provide instant feedback, create interactive and engaging learning environments, and facilitate collaborative knowledge creation.

Digital pedagogy refers to pedagogical approaches and strategies that use digital technologies to support teaching and learning. Prospective educators learn the principles and practices of digital pedagogy, including the use of multimedia resources, online collaboration tools, and flexible learning platforms. They learn to design technology-rich learning experiences that develop critical thinking, creativity, problem-solving, and digital citizenship skills.

Universal Design for Learning (UDL):

UDL is a system that promotes inclusive education by providing multiple means of representation, participation and expression. Prospective educators will learn about UDL principles and how digital technologies can be used to create accessible and inclusive learning environments. They learn to design and adapt digital materials to meet the diverse needs of students, including those with disabilities or different learning preferences.

By grounding future educators in these theoretical frameworks, the methodology ensures that they have a solid understanding of the key principles and concepts that enable the effective integration of digital technologies into education. This knowledge guides their decision-making processes and enables them to design and implement technology-enhanced learning experiences that optimize student engagement, learning outcomes, and overall educational effectiveness.

Practical training:

The methodology includes practical training components that allow future pedagogues to gain practical experience with digital technologies. This includes workshops, seminars, and labs exploring a variety of educational software, applications, and tools. They learn to effectively use digital resources for lesson planning, content creation, assessment, and classroom management. In addition, they have skills in using multimedia, gamification, virtual reality and other emerging technologies to enhance learning.

Cooperative Education:

Cooperative learning plays an important role in the methodology because it provides opportunities for peer learning and knowledge sharing for future educators. Collaborative projects and group activities involving the use of digital technologies promote teamwork, problem solving and the exchange of innovative ideas. Through these experiences, future educators develop the digital communication and collaboration skills that are critical to creating a technology-rich classroom environment.

Mentoring and feedback:

The methodology includes mentoring and feedback mechanisms to support the growth and development of future educators. Experienced teachers or technology experts serve as mentors to guide and support educators in learning the ins and outs of integrating digital technologies. Regular feedback sessions help identify areas for improvement and provide constructive suggestions for improvement. This iterative process facilitates continuous learning and improvement.

Recognizing the dynamic nature of digital technologies, the methodology emphasizes the importance of continuous professional development. Prospective educators are encouraged to stay abreast of the latest trends and research in educational technology and engage in lifelong learning. They are directed to attend conferences, seminars and online courses to expand their knowledge and improve their skills. An ongoing commitment to professional development ensures that educators are proficient in adapting to evolving digital landscapes. The methodology includes a comprehensive assessment and evaluation system to measure the competence of future educators in the use of digital technologies. It uses formative and summative assessment strategies, including performance tasks, portfolios, and reflective journals. The evaluation process considers educators' ability to design and deliver technology-enhanced lessons, effectively integrate digital resources, and assess the impact of technology on student learning outcomes.

SUMMARY

The proposed methodology provides a systematic and comprehensive approach to the development of the competences of future pedagogues in the use of digital technologies. Combining theory, hands-on training, collaborative learning, mentoring, and continuous professional development, it equips educators with the knowledge, skills, and attitudes needed to effectively use digital tools. Adopting this methodology will help create an innovative and technology-driven learning ecosystem that prepares students for the challenges of the digital age.

REFERENCES

1. Marasulova, Zulayho Abdullayevna, and Makhfuza Khabibovna Zakhidova. "PRIORITY DIRECTIONS OF EFFICIENCY OF USE OF DIGITAL TECHNOLOGIES IN THE EDUCATIONAL SYSTEM." *Galaxy International Interdisciplinary Research Journal* 10.11 (2022): 743-748.
2. Marasulova, Zulayho Abdullayevna, and Makhfuza Khabibovna Zakhidova. "PROBLEMS OF ENSURING THE CONTINUITY OF THE SUBJECT" COMPUTER SCIENCE AND INFORMATION TECHNOLOGY" IN THE SYSTEM OF CONTINUING EDUCATION." *Galaxy International Interdisciplinary Research Journal* 10.12 (2022): 1042-1046.
3. Xabibovna, Zohidova Mahfuza. "ISSUES OF USE OF INFORMATION TECHNOLOGIES IN IMPROVING THE QUALITY OF SEMINAR LESSONS IN HIGHER EDUCATION." *Galaxy International Interdisciplinary Research Journal* 10.12 (2022): 275-278.

4. Mahfuza, Zohidova. "ASSESSMENT AND CONTROL OF DIGITAL COMPETENCIES." Open Access Repository 9.11 (2023): 15-16.
5. Marasulova, Zulayxo, and Maxfuza Zoxidova. "“TA'LIMDA RAQAMLI TEXNOLOGIYALAR” FANINI FANLARARO ALOQADORLIKDA O'QITISHDAGI INNOVATSIYALAR." Interpretation and researches 1.1 (2023).
6. Зохидова, Махфуза Хабибовна. "ИНФОГРАФИКА: ВИЗУАЛИЗАЦИЯ ИНФОРМАЦИИ В СОВРЕМЕННОМ МИРЕ."
7. Obidovich, Najmiddinov Faxriddin. "Masofaviy TaLim Va Raqamli Texnologiya." Miasto Przyszłości 29 (2022): 204-206.
8. Нажмиддинов, Фахриддин Обидович, and Дилрабо Абдурашидовна Худойназарова. "О ВЛИЯНИИ УЗБЕКСКОЙ ЛЕГКОЙ ПРОМЫШЛЕННОСТИ (НА ПРИМЕРЕ ПРЕДПРИЯТИЙ ФЕРГАНСКОЙ ДОЛИНЫ) НА ОКРУЖАЮЩУЮ СРЕДУ." Россия и мир в новое и новейшее время-из прошлого в будущее. 2019.
9. Нажмиддинов, Фахриддин Обидович, and Дилрабо Абдурашидовна Худойназарова. "РАЗВИТИЕ ГОРОДСКОГО ХОЗЯЙСТВА В АНДИЖАНЕ В 20-Е ГГ. XX ВЕКА." Россия и мир в новое и новейшее время-из прошлого в будущее. 2019.
10. Рахимова, Г. С., Ф. О. Нажмиддинов, and О. А. Болтабаев. "ПРОМЫШЛЕННЫЕ РАБОЧИЕ В УЗБЕКИСТАНЕ В ГОДЫ ГРАЖДАНСКОЙ ВОЙНЫ INDUSTRIAL WORKERS IN UZBEKISTAN IN THE YEARS OF THE CIVIL WAR." Редакционная коллегия (2019): 94.
11. Obidovich, Najmiddinov Faxriddin. "ELECTRONIC EDUCATION AND ITS PROBLEMS." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 764-767.
12. Obidovich, Najmiddinov Faxriddin. "ADVANTAGES OF ELECTRONIC EDUCATION IN EDUCATIONAL INSTITUTIONS." INTERDISCIPLINE INNOVATION AND SCIENTIFIC RESEARCH CONFERENCE. Vol. 2. No. 15. 2023.
13. Shuxratovich, Shirinov Feruzjon. "Grafik dasturlar bilan ishlash texnologiyasi". Ochiq kirish ombori 9.12 (2022): 99-102.
14. Meliqo'ziyevich, Siddiqov Ilhomjon, va Shirinov Feruzjon Shuhratovich. "BILIM TEXNOLOGIYALARINI ISHLAB CHIQUISHDA PEDAGOGIK VA USULLARNING O'RNI". Galaxy xalqaro fanlararo tadqiqot jurnali 11.6 (2023): 559-562.
15. Shuhratovich, Shirinov Feruzjon. "Kompyuter grafikasi sohasi va uning axborot jamiyatidagi ahamiyati, roli va o'rni". Texas multidisipliner tadqiqotlar jurnali 4 (2022): 86-88.
16. Feruzjon, Shirinov, Akramov Azamatjon, and Abdullaeva Qizlarxon. "OMMAVIY ONLAYN OCHIQ KURSLAR." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISH 2.20 (2023): 125-128.
17. Shuxratovich, Shirinov Feruzjon, Usmonova Gulnoza va Azimova Madina. "TA'LIMDA SMART TEXNOLOGIYALARI." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISH 2.20 (2023): 129-133.
18. Shuxratovich, Shirinov Feruzjon, Abdullaeva Qizlarxon, and Usmonova Gulnoza. "BULUTLI TEXNOLOGIYALARNING AFZALLIKLARI VA

- KAMCHILIKLARI." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISH 2.20 (2023): 134-138.
19. Turdaliyev, Sodiqjon. "THE ROLE OF DIGITAL TECHNOLOGIES IN THE ORGANIZATION OF DISTANCE EDUCATION." *Models and methods in modern science* 2.13 (2023): 46-49.
 20. Turdaliyev, Sodiqjon. "IMPORTANCE, CHARACTERISTICS AND TASKS OF ONLINE TRAINING." *Solution of social problems in management and economy* 2.13 (2023): 63-68.
 21. Ilyasovich, Djurayev Iqbol, Turdaliyev Sadigjon Muminzhonovich, and Ergasheva Khilolokhon Muydinzhonovna. "The Need to Develop Distance Education in General Secondary Schools." *Journal of Advanced Zoology* 44.S6 (2023): 1551-1554.
 22. Turdaliyev, Sodiqjon. "TA'LIM MUASSALARIDA INFORMATIKA O'QITISH METODIKASI NAZARIY ASOSLARI." *Interpretation and researches* 1.1 (2023).
 23. Yuldashev, A. R., and S. M. Turdaliyev. "MAKING INFORMATION SECURITY STRATEGIC TO BUSINESS." *Galaxy International Interdisciplinary Research Journal* 10.12 (2022): 128-131.
 24. Turdaliyev, S. M. "ALGORITMLARNI ISHLAB CHIQUISH USULLARIDAN FOYDALANISH." *Экономика и социум* 6-2 (109) (2023): 545-548.
 25. Akhmedovna, Madrakhimova Makhfuza, and Madrakhimov Shukhratjon Shukurovich. "The Role Of Information Communication Media In The Development Of The Methodology For The Use Of Electronic Resources "3d" In Education." *Onomázein* 62 (2023): December (2023): 2081-2087.
 26. Sh, Madraximov Sh. "МАТЕМАТИКА О 'QITISHDA IQTISODIY MASALALARNI ISHLAB CHIQUARISH JARAYONLARIGA TADBIQIY YECHISH HAQIDA." *Экономика и социум* 6-1 (109) (2023): 243-246.
 27. Козлов, Александр Дмитриевич, Шухратжон Шукурович Madрахимов, and Махфуза Ахмедовна Madрахимова. "ЎҚУВ ФАОЛИЯТИНИ БАҲОЛАШ МЕЗОНЛАРИ ВА УНИНГ ТУРЛИ ТАЛҚИНЛАРИ." " USA" INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE TOPICAL ISSUES OF SCIENCE. Vol. 8. No. 1. 2023.
 28. Abdullayev, A. K., N. R. Abdullayeva, and M. A. Madraximova. "THE BASIS IS A MOBILE INDUSTRIAL ROBOT CORE CHARACTERISTICS AND SHAPE OF THE SPATIAL STRUCTURE." *International Journal of Early Childhood Special Education* 14.7 (2022).
 29. Akhmedovna, Makhfuza Madrakhimova, and Shukhratjon Madrakhimov Shukurovich. "LEVERAGING INTERACTIVE METHODS FOR ADVANCING COMPUTER SCIENCE: A PARADIGM SHIFT." *Galaxy International Interdisciplinary Research Journal* 11.12 (2023): 1116-1120.
 30. Qodiraliyevich, Abdullayev Alibek, Madraximov Shuxratjon Shukurovich, and Madraximova Maxfuza Axmedovna. "TALABALARNING MUSTAQIL ISHINI TASHKIL ETISHDA MASOFAVIY TA'LIMNING O'RNINI." INTERDISCIPLINE INNOVATION AND SCIENTIFIC RESEARCH CONFERENCE. Vol. 2. No. 15. 2023.
 31. Rustamovich, Sultonov Ravshanbek, and Toshmatova Ziroatxon Esonovna. "FORMATION OF STUDENTS' INTERESTS IN THE STUDY OF SCIENCE, KNOWLEDGE AND SKILLS IN TEACHING PHYSICS." *Open Access Repository* 8.12 (2022): 517-520.

32. Esonovna, Toshmatova Ziroatxon. "FIZIKA FANINI O'RGATISHDA O'QUVCHILARNI FANNI O'RGANISHIGA BO'LGAN QIZIQISHLARINI, BILIM VA KO'NIKMALARNI SHAKLLANTIRISH." Scientific Impulse 1.5 (2022): 361-364.
33. Farkhodovich, Kamalov Azamat. "ESSENCE, CHARACTERISTICS, DIDACTIC PRINCIPLES AND TYPES OF DISTANCE LEARNING."
34. Farkhodovich, Kamalov Azamat. "TECHNOLOGICAL FUNDAMENTALS OF CREATING INTERACTIVE E-LEARNING COURSES BASED ON MULTIMEDIA TECHNOLOGIES." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 608-612.
35. Farkhodovich, Kamalov Azamat. "APPLICATION OF MODERN INFORMATION TECHNOLOGY TO DISTANCE EDUCATION." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 599-601.
36. Kamalov, A. F. "Masofaviy ta'lim sharoitida metodik tayyorgarlikni takomillashtirishning pedagogik asoslari." TDPU Ilmiy axborotlari 1.8 (2022): 416-420.
37. Shuxratovich, Shirinov Feruzjon. «TA'LIMDA INNOVATSION TEXNOLOGIYALARDAN FOYDALANISH ISHLAB CHIQUISHLARI». Galaxy xalqaro fanlararo tadqiqot jurnali 11.12 (2023): 60-65.
38. Shuxratovich, Shirinov Feruzjon. "MASFIQ TA'LIM TIZIMINING NAZARIY-DIDAKTIK ASOSLARI". Galaxy xalqaro fanlararo tadqiqot jurnali 11.12 (2023): 66-71.
39. Shuhratovich, Shirinov Feruzbek. "TA'LIM JARAYONIDA AN'ANAVIY VA NOAN'ANAVIY TA'LIM TEXNOLOGIYALARIDAN FOYDALANISH." PEDAGOG 6.6 (2023): 303-307.
40. Shuhratovich, Shirinov Feruzbek. "TA'LIM JARAYONIDA ZAMONAVIY TEXNOLOGIYALARDAN FOYDALANISH." PEDAGOG 6.6 (2023): 298-302.
41. Shuxratovich, Shirinov Feruzjon. "Veb-saytlar yaratish TEXNOLOGIYALARI." INTELLEKTUAL TA'LIM TEXNOLOGIK YECHIMLARI VA INNOVATSION RAQAMLI VOSITALARI 2.19 (2023): 57-63.
42. Shuxratovich, Shirinov Feruzjon. "VEB MATNNI TAZASH VA SHAKLLANISH". INTELLEKTUAL TA'LIM TEXNOLOGIK YECHIMLARI VA INNOVATSION RAQAMLI ASOBOTLAR 2.19 (2023): 51-56.
43. Raximjonovna, Fayziyeva Maxbuba. "DEVELOPMENT TENDENCIES AND CLASSIFICATION OF PROGRAMMING LANGUAGES TEACHED IN HIGH SCHOOLS." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 185-189.
44. Jumakuziyevich, Yuldoshev Utkir. "Pedagogy Methodology As The Basis For The Formation Of Teacher Methodological Culture." Journal of Positive School Psychology 6.11 (2022): 2019-2022.
45. Jumankuziev, Uktamjon, et al. "COMPUTER GRAPHICS AND WEB DESIGN IN EDUCATION AND SOCIETY." THEORY AND ANALYTICAL ASPECTS OF RECENT RESEARCH 2.20 (2023): 15-20.
46. Jumankuziev, Uktamjon, et al. "DEVELOPMENT TRENDS OF MODERN PROGRAMMING LANGUAGES." SCIENTIFIC APPROACH TO THE MODERN EDUCATION SYSTEM 2.20 (2023): 139-144.

47. Uktamjon, Jumankuziev. "THE ROLE OF TEACHERS IN TEACHING PROGRAMMING LANGUAGES IN HIGHER EDUCATIONAL INSTITUTIONS OF PEDAGOGY." *Gospodarka i Innowacje*. 41 (2023): 360-362.
48. Farkhodovich, Kamalov Azamat. "STUDENTSGRAPHIC INCREASING LITERACY INNOVATION-CREATIVITY AND IMAGINATION OF THE WORLD, TO THE FORMATION." *Galaxy International Interdisciplinary Research Journal* 11.12 (2023): 592-594.
49. Makhmudova, O. Yu. "INNOVATIVE ORGANIZATION OF INDEPENDENT EDUCATION OF STUDENTS METHODS AND TOOLS." *Open Access Repository* 9.3 (2023): 216-220.
50. Махмудова, Озода Юлдашевна. "ПРЕОБРАЗОВАНИЯ ПЛОСКОСТИ ДЛЯ РЕШЕНИЯ ЗАДАЧ КУРСА ГЕОМЕТРИИ АКАДЕМИЧЕСКОГО ЛИЦЕЯ." *Актуальные научные исследования в современном мире* 12-1 (2016): 74-79.
51. Устаджалилова, Хуршида Алиевна, and Озода Махмудова. "Решение задач с применением метода геометрических преобразований с целью развития геометрических умений учащихся." *Молодой ученый* 3-1 (2016): 19-21.
52. Mahmudova, O. Y. "Extracurricular And Elective Classes In Mathematics." *International Journal of Innovative Research in Science, Engineering and Technology*.
53. Akhadovna, Akhmedova Gavkhar, and Makhmudova Ozoda Yuldashevna. "Extreme Issues Related to Irrational Functions and Geometric Methods for Solving Equations." *International Journal on Orange Technologies* 3.5: 93-96.
54. Yu, Juraev Sh, and N. A. Makhmudova. "SOME REFINEMENTS OF THE LIMIT THEOREMS FOR GALTON-WATSON BRANCHING RANDOM PROCESSES." *Open Access Repository* 8.12 (2022): 268-276.
55. Yuldashev, A. R., and S. M. Turdaliyev. "MAKING INFORMATION SECURITY STRATEGIC TO BUSINESS." *Galaxy International Interdisciplinary Research Journal* 10.12 (2022): 128-131.
56. Турдалиев, Содикжон Муминжонович. "КОМПЬЮТЕР ЎЙИНЛАРИНИНГ ЎСМИР ШАХСИГА КЎРСАТАДИГАН ИЖОБИЙ ВА САЛБИЙ ТАЪСИРЛАРИ." "USA" INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE TOPICAL ISSUES OF SCIENCE. Vol. 8. No. 1. 2023.
57. Muminjonovich, Turdaliyev Sodikjon. "POSITIVE AND NEGATIVE EFFECTS OF COMPUTER GAMES ON ADOLESCENT PERSONALITY." *Galaxy International Interdisciplinary Research Journal* 11.6 (2023): 310-314.
58. Yuldashev, A. R., and S. M. Turdaliyev. "INTRODUCTION TO ANDROID DEVELOPMENT." *Galaxy International Interdisciplinary Research Journal* 10.12 (2022): 132-134.
59. Sodiqjon, Turdaliyev. "AR (AUGEMENT REALITY) AND ITS POSSIBILITIES." *Gospodarka i Innowacje*. 41 (2023): 394-396.
60. Mo'minjonovich, Turdaliyev Sodiqjon. "UNITY 3D GAMING SOFTWARE AND ITS CAPABILITIES." *Gospodarka i Innowacje*. 41 (2023): 397-399.

