EXPERIMENTS ON INTERACTIVE METHODS AND DIGITIZATION OF LESSONS IN HEIS

Najmiddinov Faxriddin Obidovich, KSPI Interfaculty Department of Mathematics and Informatics

ABSTRACT

In this article, the characteristics of the educational process in higher educational institutions, as well as the importance of universities in society and economy are changing rapidly. All over the world, universities are competing with each other to attract students, teachers and financial resources. In such a competition, higher education institutions that keep up with the times and use new digital opportunities are gaining an advantage over others.

Keywords: Digitization, curriculum, social networks and mobile applications, UX design, virtual or cyberspace

INTRODUCTION

Digitization has created new opportunities for education and management, facilitating data collection and analysis, collaboration and communication. The benefits of digitization include increased productivity, increased student engagement, personalized learning, and the use of new teaching methods. In addition, digitization facilitates the management of universities, curricula, faculty, staff, and resources. One of the main benefits of digitization is the opportunities to increase student engagement. Using digital tools such as online learning platforms, social media and mobile apps, universities can create interactive and engaging learning experiences that keep students motivated and on track. Also, digitization allows universities to use new teaching methods such as games and virtual reality. These techniques can be used to create interactive learning experiences that make it easier for students to understand complex concepts and theories. In order to increase students' learning rates, to increase employment rates by forming the necessary competencies in them, and to increase the prestige of universities that use information delivery and explanation methods through various means, and to get additional benefits through these opportunities. an advantage over others is formed through the creation of conditions.

It should be noted that nowadays students are very different than before. Now they have modern demands and needs, and the providers of modern higher education services should be worthy of them. Today, according to the main demand of the time, educational organizations, especially higher education organizations, should rely on new technologies such as flexible learning, artificial intelligence, UX-design, virtual or cyberspace in the development of their activities. , augmented reality. At this point, it is necessary for higher education organizations to gradually move to the concept described as "University 4.0", in some cases "digital university" or "smart university". Therefore, a modern digital university offers convenient opportunities that help students and teachers organize the teaching process and communications, automate digital recording and analysis without bureaucracy, competently design individual educational trajectories, and quickly respond to possible problems. and should provide services. Therefore, a modern digital university offers convenient opportunities

that help students and teachers organize the teaching process and communications, automate digital recording and analysis without bureaucracy, competently design individual educational trajectories, and quickly respond to possible problems. and should provide services.

The role and opportunities of interactive methods in the process of education and training. The interactive method - by increasing the activity between students and the teacher in the educational process, serves to activate the acquisition of knowledge and develop personal qualities of students. The use of interactive methods helps to increase the effectiveness of the lesson. The main criteria of interactive education: conducting informal debates, the opportunity to freely describe and express the educational material, the number of lectures is small, but the number of seminars is large, the creation of opportunities for students to take initiative, small group, large group, class team assignment, writing assignments and other methods, which are of special importance in increasing the effectiveness of educational work. Effectiveness factors of interactive training Currently, one of the main directions in the field of improving educational methods is the introduction of interactive education and training methods. Teachers of all subjects are increasingly using interactive methods in the course of lessons. As a result of the use of interactive methods, the students' skills of independent thinking, analysis, drawing conclusions, expressing their opinion, being able to defend it based on reasons, healthy communication, discussion, debate are formed and developed. In this matter, the American psychologist and pedagogue B. Bloom created a taxonomy of pedagogical goals in cognitive and emotional spheres.

It is called Bloom's Taxonomy. (Taxonomy-the theory of classification and systematization of complex structured spheres of existence). He divided thinking into six levels according to the development of cognitive abilities. According to him, the development of thinking is at the levels of knowledge, understanding, application, analysis, generalization, and evaluation. Each of these levels is represented by the following symbols and examples of verbs corresponding to each level, including: Knowing is the initial level of thinking in which the student can pronounce terms, know specific rules, concepts, facts, and so on. Examples of verbs according to this level of thinking: to be able to return, to be able to strengthen, to be able to convey information, to be able to tell, to be able to write, to be able to express, to distinguish, to be able to recognize, to tell, to repeat. When he has comprehension level thinking, the student understands facts, rules, schemes, and tables. Based on the available information, he can predict future consequences. Examples of verbs according to this level of thinking: justify, replace, clarify, define, explain, translate, rearrange, illuminate, interpret, clarify.

At the level of application thinking, the student can use the acquired knowledge not only in traditional, but also in non-traditional situations and apply them correctly. Examples of verbs according to this level of thinking: introduce, calculate, demonstrate, use, teach, determine, implement, calculate, implement, solve. In thinking at the level of analysis, the student can distinguish parts of the whole and their interrelationships, see errors in the logic of thinking, distinguish between facts and consequences, evaluate the importance of information. Examples of verbs according to this level of thinking: generate, separate, classify, classify, guess, predict, spread, distribute, check, group. In thinking at the level of generalization, the student performs creative work, plans an experiment, uses knowledge in several areas.

Creatively processes information to create something new. Examples of verbs according to this level of thinking: create new, generalize, combine, plan, develop, systematize, combine, create, structure, design. In thinking at the evaluation level, the student can distinguish criteria, observe them, see the variety of criteria, evaluate the compatibility of conclusions with available information, distinguish between facts and evaluative opinions. Examples of verbs according to this level of thinking are: diagnose, prove, measure, control, justify, approve, evaluate, check, compare, contrast. There are many different interactive methods, and all of them, like any progressive method, first of all, require a lot of preparation from the teacher before the training.

CONCLUSION

Thus, during the last decade, a series of studies on the problem of creating a digital educational environment in economically developed foreign countries have been carried out. In the last five years, the problem of creating a digital educational environment has become urgent in Uzbekistan. In the conditions of COVID-19, this problem has become more urgent. Therefore, the first practical experience of organizing online education was also collected at the Higher Education Institution of Uzbekistan. Nevertheless, until now, a well-founded mechanism for creating digital education has not been developed, a system has not been created in the republic. This situation, in turn, requires a serious study of the problem of creating a digital educational environment in HEIs and the creation of a special methodology.

REFERENCES

- 1. Obidovich, Najmiddinov Fakhriddin. "Masofaviy TaLim Va Raqamli Texnologiya." Miasto Przyszłości 29 (2022): 204-206.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. Obidovich, Najmiddinov Faxriddin. "ELECTRONIC EDUCATION AND ITS PROBLEMS." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 764-767.
- 6. Obidovich, Najmiddinov Faxriddin. "ADVANTAGES OF ELECTRONIC EDUCATION IN EDUCATIONAL INSTITUTIONS." INTERDISCIPLINE INNOVATION AND SCIENTIFIC RESEARCH CONFERENCE. Vol. 2. No. 15. 2023.
- 7. Shuxratovich, Shirinov Feruzjon. "Grafik dasturlar bilan ishlash texnologiyasi". Ochiq kirish ombori 9.12 (2022): 99-102.

- 8. Meliqo'ziyevich, Siddiqov Ilhomjon, va Shirinov Feruzjon Shuhratovich. "BILIM TEXNOLOGIYALARINI ISHLAB CHIQISHDA PEDAGOGIK VA USULLARNING O'RNI". Galaxy xalqaro fanlararo tadqiqot jurnali 11.6 (2023): 559-562.
- 9. Shuhratovich, Shirinov Feruzjon. "Kompyuter grafikasi sohasi va uning axborot jamiyatidagi ahamiyati, roli va oʻrni". Texas multidisipliner tadqiqotlar jurnali 4 (2022): 86-88.
- 10. Feruzjon, Shirinov, Akramov Azamatjon, and Abdullaeva Qizlarxon. "OMMAVIY ONLAYN OCHIQ KURSLAR." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISh 2.20 (2023): 125-128.
- 11. Shuxratovich, Shirinov Feruzjon, Usmonova Gulnoza va Azimova Madina. "TA'LIMDA SMART TEXNOLOGIYALARI." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISh 2.20 (2023): 129-133.
- 12. Shuxratovich, Shirinov Feruzjon, Abdullaeva Qizlarxon, and Usmonova Gulnoza.
 "BULUTLI TEXNOLOGIYALARNING AFZALLIKLARI VA
 KAMCHILIKLARI." ZAMONAVIY TA'LIM TIZIMINA ILMIY YONDORISh 2.20 (2023):
 134-138.
- 13. Turdaliyev, Sodiqjon. "THE ROLE OF DIGITAL TECHNOLOGIES IN THE ORGANIZATION OF DISTANCE EDUCATION." Models and methods in modern science 2.13 (2023): 46-49.
- 14. Turdaliyev, Sodiqjon. "IMPORTANCE, CHARACTERISTICS AND TASKS OF ONLINE TRAINING." Solution of social problems in management and economy 2.13 (2023): 63-68.
- 15. 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.
- 16. Turdaliyev, Sodiqjon. "TA'LIM MUASSALARIDA INFORMATIKA OʻQITISH METODIKASI NAZARIY ASOSLARI." Interpretation and researches 1.1 (2023).
- 17. Yuldashev, A. R., and S. M. Turdaliyev. "MAKING INFORMATION SECURITY STRATEGIC TO BUSINESS." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 128-131.
- 18. Turdaliyev, S. M. "ALGORITMLARNI ISHLAB CHIQISH USULLARIDAN FOYDALANISH." Экономика и социум 6-2 (109) (2023): 545-548.
- 19. 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.
- 20. Sh, Madraximov Sh. "MATEMATIKA O 'QITISHDA IQTISODIY MASALALARNI ISHLAB CHIQARISH JARAYONLARIGA TADBIQIY YECHISH HAQIDA." Экономика и социум 6-1 (109) (2023): 243-246.
- 21. Козлов, Александр Дмитриевич, Шухратжон Шукурович Мадрахимов, and Махфуза Ахмедовна Мадрахимова. "ЎҚУВ ФАОЛИЯТИНИ БАХОЛАШ МЕЗОНЛАРИ ВА УНИНГ ТУРЛИ ТАЛҚИНЛАРИ." " USA" INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE TOPICAL ISSUES OF SCIENCE. Vol. 8. No. 1. 2023.

- 22. Abdullayev, A. K., N. R. Abdullayeva, and M. A. Madraximova. "THE BASIS IS A MOBILE INDUSTRIAL ROBOT CORECHARACTERISTICS AND SHAPE OF THE SPATIAL STRUCTURE." International Journal of Early Childhood Special Education 14.7 (2022).
- 23. 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.
- 24. Qodiraliyevich, Abdullayev Alibek, Madraximov Shuxratjon Shukurovich, and Madraximova Maxfuza Axmedovna. "TALABALARNING MUSTAQIL ISHINI TASHKIL ETISHDA MASOFAVIY TA'LIMNING O ʻRNI." INTERDISCIPLINE INNOVATION AND SCIENTIFIC RESEARCH CONFERENCE. Vol. 2. No. 15. 2023.
- Toshmatova 25. Rustamovich, Sultonov Ravshanbek, and Ziroatxon Esonovna. OF "FORMATION STUDENTS'INTERESTS IN THE STUDY OF SCIENCE, KNOWLEDGE AND SKILLS IN TEACHING PHYSICS." Open Access Repository 8.12 (2022): 517-520.
- 26. 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.
- 27. Farkhodovich, Kamalov Azamat. "ESSENCE, CHARACTERISTICS, DIDACTIC PRINCIPLES AND TYPES OF DISTANCE LEARNING."
- 28. 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.
- 29. Farkhodovich, Kamalov Azamat. "APPLICATION OF MODERN INFORMATION TECHNOLOGY TO DISTANCE EDUCATION." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 599-601.
- 30. Kamalov, A. F. "Masofaviy ta'lim sharoitida metodik tayyorgarlikni takomillashtirishning pedagogik asoslari." TDPU Ilmiy axborotlari 1.8 (2022): 416-420.
- 31. Shuxratovich, Shirinov Feruzjon. «TA'LIMDA INNOVATSION TEXNOLOGIYALARDAN FOYDALANISH ISHLAB CHIQISHLARI». Galaxy xalqaro fanlararo tadqiqot jurnali 11.12 (2023): 60-65.
- 32. Shuxratovich, Shirinov Feruzjon. "MASFIQ TA'LIM TIZIMINING NAZARIY-DIDAKTIK ASOSLARI". Galaxy xalqaro fanlararo tadqiqot jurnali 11.12 (2023): 66-71.
- 33. Shuhratovich, Shirinov Feruzbek. "TA'LIM JARAYONIDA AN'ANAVIY VA NOAN'ANAVIY TA'LIM TEXNOLOGIYALARIDAN FOYDALANISH." PEDAGOG 6.6 (2023): 303-307.
- 34. Shuhratovich, Shirinov Feruzbek. "TA'LIM JARAYONIDA ZAMONAVIY TEXNOLOGIYALARDAN FOYDALANISH." PEDAGOG 6.6 (2023): 298-302.
- 35. Shuxratovich, Shirinov Feruzjon. "Veb-saytlar yaratish TEXNOLOGIYALARI." INTELLEKTUAL TA'LIM TEXNOLOGIK YECHIMLARI VA INNOVATSION RAQAMLI VOSITALARI 2.19 (2023): 57-63.

- 36. Shuxratovich, Shirinov Feruzjon. "VEB MATNNI TAZASH VA SHAKLLANISH". INTELLEKTUAL TA'LIM TEXNOLOGIK YECHIMLARI VA INNOVATSION RAQAMLI ASOBOTLAR 2.19 (2023): 51-56.
- 37. Raximjonovna, Fayziyeva Maxbuba. "DEVELOPMENT TENDENCIES AND CLASSIFICATION OF PROGRAMMING LANGUAGES TEACHED IN HIGH SCHOOLS." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 185-189.
- 38. 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.
- 39. 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.
- 40. Jumankuziev, Uktamjon, et al. "DEVELOPMENT TRENDS OF MODERN PROGRAMMING LANGUAGES." SCIENTIFIC APPROACH TO THE MODERN EDUCATION SYSTEM 2.20 (2023): 139-144.
- 41. Uktamjon, Jumankuziev. "THE ROLE OF TEACHERS IN TEACHING PROGRAMMING LANGUAGES IN HIGHER EDUCATIONAL INSTITUTIONS OF PEDAGOGY." Gospodarka i Innowacje. 41 (2023): 360-362.
- 42. Farkhodovich, Kamalov Azamat. "STUDENTSGRAPHIC INCREASING LITERACY INNOVATION-CREATIVITY AND IMAGINATIONOF THE WORLD, TO THE FORMATION." Galaxy International Interdisciplinary Research Journal 11.12 (2023): 592-594.
- 43. Makhmudova, O. Yu. "INNOVATIVE ORGANIZATION OF INDEPENDENT EDUCATION OF STUDENTS METHODS AND TOOLS." *Open Access Repository* 9.3 (2023): 216-220.
- 44. Махмудова, Озода Юлдашевна. "ПРЕОБРАЗОВАНИЯ ПЛОСКОСТИ ДЛЯ РЕШЕНИЯ ЗАДАЧ КУРСА ГЕОМЕТРИИ АКАДЕМИЧЕСКОГО ЛИЦЕЯ." *Актуальные научные исследования в современном мире* 12-1 (2016): 74-79.
- 45. 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.
- 46. Mahmudova, O. Y. "Extracurricular And Elective Classes In Mathematics." *International Journal of Innovative Research in Science, Engineering and Technology.*
- 47. 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.
- 48. 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.
- 49. Yuldashev, A. R., and S. M. Turdaliyev. "MAKING INFORMATION SECURITY STRATEGIC TO BUSINESS." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 128-131.

- 50. 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.
- 51. Muminjonovich, Turdaliyev Sodikjon. "POSITIVE AND NEGATIVE EFFECTS OF COMPUTER GAMES ON ADOLESCENT PERSONALITY." Galaxy International Interdisciplinary Research Journal 11.6 (2023): 310-314.
- 52. Yuldashev, A. R., and S. M. Turdaliyev. "INTRODUCTION TO ANDROID DEVELOPMENT." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 132-134.
- 53. Sodiqjon, Turdaliyev. "AR (AUGEMENT REALITY) AND ITS POSSIBILITIES." Gospodarka i Innowacje. 41 (2023): 394-396.
- 54. Mo'minjonovićh, Turdaliyev Sodiqjon. "UNITY 3D GAMING SOFTWARE AND ITS CAPABILITIES." Gospodarka i Innowacje. 41 (2023): 397-399.
- 55. 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.
- 56. Marasulova, Zulayho Abdullayevna, and Makhfuza Khabibovna Zakhidova. "PROBLEMS OF ENSURING THE CONTINUITY OF THE SUBJECT" COMPYUTER SCIENCE AND INFORMATION TECHNOLOGY" IN THE SYSTEM OF CONTINUING EDUCATION." Galaxy International Interdisciplinary Research Journal 10.12 (2022): 1042-1046.
- 57. 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.
- 58. Mahfuza, Zohidova. "ASSESSMENT AND CONTROL OF DIGITAL COMPETENCIES." Open Access Repository 9.11 (2023): 15-16.
- 59. Marasulova, Zulayxo, and Maxfuza Zoxidova. ""TA'LIMDA RAQAMLI TEXNOLOGIYALAR" FANINI FANLARARO ALOQADORLIKDA O'QITISHDAGI INNOVATSIYALAR." Interpretation and researches 1.1 (2023).
- 60. Зохидова, Махфуза Хабибовна. "ИНФОГРАФИКА: ВИЗУАЛИЗАЦИЯ ИНФОРМАЦИИ В СОВРЕМЕННОМ МИРЕ."