TA'LIMDA AXBOROT KOMMUNIKASION TEXNOLOGIYALARDAN FOYDALANISH

Qodirov Akmaldin Abdumalikovich,
Farg‘ona viloyati Oltiariq tumani
2 son kasb hunar maktabi
informatika va axborot texnologiyalari fani o‘qituvchisi

Annotasiya: Maqolada barcha fanlardan ta'lim berishda axborot kommunikasion texnologiyalardan foydalanishning qulayliklari, ta'lim samarasi, o'quvchilar bilimlarini nazorat qilish kabi masalalarga to'xtalinadi.

Kalit so'zlar: Ta'lim, fan, kompyuter, texnika, ishlash, axborot.

Аннотация: В статье уделяется внимание таким вопросам, как удобство использования информационно-коммуникационных технологий при преподавании всех предметов, эффективность обучения, контроль знаний учащихся.

Ключевые слова: Образование, наука, компьютер, технология, производительность, информация.

Abstract: The article pays attention to such issues as the ease of use of information and communication technologies in teaching all subjects, the effectiveness of teaching, and monitoring students' knowledge.

Key words: Education, science, computer, technology, productivity, information.

Bilim olishda, ya'ni ma'lum turdagi axborotlarni o'zlashtirishda kompyuterlar tizimining yordami benihoya kattadir. Axborotlar qanday turda ifodalanishidan qa'tiy nazar, ularni yig'ish, saqlash, qayta ishlash va ulardan foydalanishda kompyuter texnikasining rolini quyidagilar belgilaydi: Ta'limda axborot

kommunikasion texnologiya (AKT)laridan foydalanib fanlarni o'qitish va o'quvchilar egallagan bilimlarini nazorat qilishda foydalanish mumkin. XXI asr – axborot kommunikasion texnologiyalari asridir. Odamzod o'zining yangi rivojlanish bosichiga o'tdi – axborot va axborot jarayonlari inson hayotining asosiy tarkibiy qismidan iborat bo'lgan axborot jamiyat shakllanayapti. Bu rivojlanish nafaqat odamlar yashaydigan yangi axborot muhitni, balki ularning yangi hayot tarzi va kasbiy faoliyati shakllanmoqda. O'zbekiston Respublikasi «Kadrlar tayyorlash Milliy dasturi» va «Ta'lim to'g'risida»gi qonunlarda ta'limni sifatini ko'tarish masalasi ko'tarilgan. Informatikalashtirish ta'lim tizimini isloh qilishning muhim mexanizmidan iborat bo'lib, u ta'limni sifati, tushunarliligi va samaradorligini ko'tarishga qaratilgan.

AKT – bu axborotlarni to'plash, qayta ishlash taqdim etish va uzatishning turli uslub, usul va algoritmlarini tavsiflovchi umumlashtiruvchi tushunchadir. AKT to'rt aspektda qaraladi: o'rganish predmeti, o'qitishning texnik vositasi, o'quv faoliyatni avtomatlashtirish-ta'limni boshqarish quroli, ya'ni tizimli yondashuvning paradigmasi sifatida, shuningdek ilmiypedagogik izlanishlarda foydalaniladi. O'quv-tarbiya jarayonida kompyuterlar asosan to'rt tartibda: passiv qo'llash – kompyuter oddiy hisoblagich kabi; reaktiv muloqot – kompyuter imtihon oluvchi sifatida; faol muloqot – kompyuter talabaga yo'l-yo'riq berish va uni bilimini nazorat qilish (imtihon)da; interfaol muloqot – kompyuter sun'iy aql sifatida, ya'ni talaba bilan muloqot qilishda foydalaniladi.

Tizimli yondashuv o'quv jarayonini texnologiyalashtirishni ifodalaydi. Bu har bir o'quvchining ish joyi kompyuter bilan jihozlangan bo'lib, 4 o'qituvchining ishchi joyi bilan aloqada bo'ladi. Bunda elektron o'quv qo'llanmalar foydalaniladi, kompyuter yordamida o'qituvchi va o'quvchining interfaol muloqoti amalga oshiriladi, elektron sinf jurnali yuritiladi, o'quv jarayonini elektron monitoringi olib boriladi, o'quvchilarni masofali o'qitish imkoniyati mavjud bo'ladi.

O'quv jarayonining texnologiyasi o'qitishning yuqori darajadagi tabaqalashtirilishini ta'minlash; darsda bajariladigan ish hajmini ko'tarish; bilimlarni nazoratini takomillashtirish; ilmiy tadqiqot faoliyati ko'nikmalarini shakllantirish; turli ma'lumotli tizimlarga, elektron kutubxonalarga, boshqa axborot resurslarga kirishni ta'minlash imkoniyatini beradi. Bu barcha tashkil etuvchilar hisobiga o'quvchilar bilimining sifati ko'tariladi. Bunday jarayonda kompyuter o'ziga o'quvchilar bilimini nazorat qilish funksiyasini oladi, darsda vaqtni iqtisod qilishga, materiallarni boy va chiroyli namoyish qilishga, qiyin tushuniladigan onlarni dinamikada ko'rsatishga, qiyinchilik tug'dirgan materiallarni takrorlashga, har bir o'quvchining xususiyatlariga ko'ra darsni tabaqalashtirishga yordam beradi. AKT turli chop etiladigan tarqatma materiallarni (mustaqil, nazorat ishi, individual ishlash uchun didaktik kartochkalar) tayyorlash uchun foydalaniladi; darsni multimedialik tashkil etish (taqdimot, audioyozuvlar, o'quv video roliklar); kompyuterli test sinovli darslar, masalalarning aniq turlarini yechish imkoniyatini beradigan qandaydir kompyuter muhiti dasturiy ta'minot bo'ladigan trening yoki modellashtirish darslari. Xonada kompyuter va printerning mavjudligi doskaga yoki kartochkalarga yozishga qaraganda tarqatma materiallarni tezroq va samarali yaratish, ya'ni materiallarni ko'p nushada (har bir o'quvchiga) ko'paytirish va nushalash imkoniyatini beradi.

Foydalanilgan adabiyotlar

1. Хатамова, З. (2021). Expenditure of income from taxes and levies in the kokand khanate: https://doi. org/10.47100/conferences. v1i1. 1230. In *research support center conferences* (No. 18.05).

2. Nazirjonovna, K. Z. (2022). SH. VOKHIDOV'S CONTRIBUTION TO THE STUDY OF THE HISTORY OF THE KOKAND KHANATE. *Innovative Society: Problems, Analysis and Development Prospects*, 139-141.

3. Xatamova, Z. (2021, June). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE. In *Конференции*.

4. Хатамова, З. (2023). Из истории денежной политики в финансовой системе Кокандского ханства. *Актуальные проблемы истории Узбекистана*, *1*(1), 327–336. извлечено от https://inlibrary.uz/index.php/history-of-uzbekistan/article/view/16511

5. Nazirjonovna, K. Z. (2022). Political-Financial Analysis of the Issues of Science of the Kokand Khanate in the Work of Khudoyorkhonzade “Anjum At-Tavorikh”. *CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY*, *3*(10), 102-111. Retrieved from https://cajssh.centralasianstudies.org/index.php/CAJSSH/article/view/463

6. Burkhonov, I. M. (2020). “ZAKAT” HAS ENSURED FAIRNESS AND BALANCE IN SOCIETY. *Theoretical & Applied Science*, (5), 201-204.

7. Muhiddinovich, B. I. (2020). Negative impact of the tax system on political life-on the example of the history of the Kokand Khanate (1850–1865). *ACADEMICIA: An International Multidisciplinary Research Journal*, *10*(5), 790-795.

8. Burkhonov, I. (2021, June). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat. In *Конференции*.

9. Burkhonov, I. (2021). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat: https://doi. org/10.47100/conferences. v1i1. 1242. In *RESEARCH SUPPORT CENTER CONFERENCES* (No. 18.05).

10. Бурханов, И. (2023). Научное наследие Шарафиддина Али Язди в интерпретации Асомиддина Оринбоева. *Актуальные проблемы истории Узбекистана*, *1*(1), 165–171.

11. BURKHONOV, I. FROM THE HISTORY OF THE TRANSLATION OF THE WORK OF ABURAZZAK SAMARKAND" MATLA'I SA'DAYN AND MAJMA'I BAHRAIN. *ЭКОНОМИКА*, 138-144.

12. Muhiddinovich, B. I. (2022). The Importance of Asomiddin Urinboev's Scientific Research in the Study of the History of the Kokan Khanate. *Kresna Social Science and Humanities Research*, *3*, 175-179.

13. Muhiddinovich, B. I. (2022). In the Study of the History of the Kokand Khanate. *Eurasian Journal of History, Geography and Economics*, *6*, 68-71.

14. Burkhanov , I. . (2022). FROM THE HISTORY OF THE USE OF THE SCIENTIFIC HERITAGE OF KOKAND SCIENTISTS ASOMIDDIN URINBOEV. *International Bulletin of Medical Sciences and Clinical Research*, *2*(10), 63–67.

15. Хатамова, З. (2021, August). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE: https://doi. org/10.47100/conferences. v1i1. 1230. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).

16. Хатамова, З. Н. Особенности налоговой системы Кокандского ханства / З. Н. Хатамова. — Текст : непосредственный // Молодой ученый. — 2020. — № 5 (295). — С. 254-256. — URL: https://moluch.ru/archive/295/66918/

17. Nazirjonovna, H. Z., & Abdumannobovich, N. M. (2020). Tax system on the territory of kyrgyzstan during the Kokand Khanate. *ACADEMICIA: An International Multidisciplinary Research Journal*, *10*(6), 209-212.

18. Xatamova, Z. (2020). Expenditure of state funds replenished by taxes in the history of the kokand khanate. *EPRA International Journal of Research and Development (IJRD)*, *5*(3), 274-277.

19. Nazirjonovna, K. Z. ., & Odinakhan, A. . (2023). PEDAGOGICAL SKILLS AND THEIR TYPES. *JOURNAL OF SCIENCE, RESEARCH AND TEACHING*, *2*(5), 18–21.

20. Khatamova, Z. N., & Almamatova , N. (2023). SPECIFIC CHARACTERISTICS OF PEDAGOGICAL TECHNOLOGIES. *Innovative Development in Educational Activities*, *2*(9), 19–23

21. Nazirjonovna, K. Z. ., & Abduvaxitovich, A. A. . (2023). APPLICATION OF MODERN TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN EDUCATION AND ITS FUTURE . *IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI*, *3*(5), 98–104.

22. Komilov, A., Xatamova, Z., Rustamov, I., Xolmatov, S., Arabboyev, X., & Ibragimov, N. Z. (2024, November). Increasing the sensitivity and selectivity of an optoelectronic gas analyzer. In *E3S Web of Conferences* (Vol. 508, p. 01009). EDP Sciences.

23. Rayimdjanova, O., Xatamova, Z., Rustamov, I., Xolmatov, S., Arabboyev, X., & Ibragimov, N. Z. (2024, November). Thermal converter for controlling horizontal wind speed and temperature. In *E3S Web of Conferences* (Vol. 508, p. 05004). EDP Sciences.

24. Nazirjonovna, K. Z. (2024). THE SIGNIFICANCE OF ZAKAT IN THE FINANCIAL SYSTEM OF THE KOKANDD KHAN. *Galaxy International Interdisciplinary Research Journal*, *12*(3), 100-105.

25. Nazirjonovna, K. Z. (2024). FROM THE HISTORY OF THE FINANCIAL SYSTEM OF THE KOKAND KHAN: CUSTOMS TAX AND OTHER COLLECTIONS. *Galaxy International Interdisciplinary Research Journal*, *12*(3), 94-99.

26. Nazirjonovna, K. Z. (2024). THE ISSUE OF CRAFTSMANSHIP IN THE FINANCIAL SYSTEM OF THE KOKAND KHANATE. *World Bulletin of Public Health*, *31*, 8-10.

27. Nazirjonovna, K. Z., & Otayorbek, A. (2023). THEORETICAL BASIS OF THE IMPLEMENTATION OF THE TURKISH EDUCATIONAL SYSTEM IN TEACHING LIGHT INDUSTRY SCIENCES. *Galaxy International Interdisciplinary Research Journal*, *11*(6), 346-350.

28. Хатамова, З. (2021). Expenditure of income from taxes and levies in the kokand khanate: https://doi. org/10.47100/conferences. v1i1. 1230. In *research support center conferences* (No. 18.05).

29. Nazirjonovna, K. Z. (2022). SH. VOKHIDOV'S CONTRIBUTION TO THE STUDY OF THE HISTORY OF THE KOKAND KHANATE. *Innovative Society: Problems, Analysis and Development Prospects*, 139-141.

30. Xatamova, Z. (2021, June). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE. In *Конференции*.

31. Хатамова, З. (2023). Из истории денежной политики в финансовой системе Коканского ханства. *Актуальные проблемы истории Узбекистана*, *1*(1), 327–336. извлечено от https://inlibrary.uz/index.php/history-of-uzbekistan/article/view/16511

32. Nazirjonovna, K. Z. (2022). Political-Financial Analysis of the Issues of Science of the Kokand Khanate in the Work of Khudoyorkhonzade “Anjum At-Tavorikh”. *CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY*, *3*(10), 102-111. Retrieved from https://cajssh.centralasianstudies.org/index.php/CAJSSH/article/view/463

33. Burkhonov, I. M. (2020). “ZAKAT” HAS ENSURED FAIRNESS AND BALANCE IN SOCIETY. *Theoretical & Applied Science*, (5), 201-204.

34. Muhiddinovich, B. I. (2020). Negative impact of the tax system on political life-on the example of the history of the Kokand Khanate (1850–1865). *ACADEMICIA: An International Multidisciplinary Research Journal*, *10*(5), 790-795.

35. Burkhonov, I. (2021, June). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat. In *Конференции*.

36. Burkhonov, I. (2021). The importance of the scientific heritage of asomiddin urinboyev in the study of the history of the Kokand khanat: https://doi. org/10.47100/conferences. v1i1. 1242. In *RESEARCH SUPPORT CENTER CONFERENCES* (No. 18.05).

37. Бурханов, И. (2023). Научное наследие Шарафиддина Али Язди в интерпретации Асомиддина Оринбоева. *Актуальные проблемы истории Узбекистана*, *1*(1), 165–171.

38. BURKHONOV, I. FROM THE HISTORY OF THE TRANSLATION OF THE WORK OF ABURAZZAK SAMARKAND" MATLA'I SA'DAYN AND MAJMA'I BAHRAIN. *ЭКОНОМИКА*, 138-144.

39. Muhiddinovich, B. I. (2022). The Importance of Asomiddin Urinboev's Scientific Research in the Study of the History of the Kokan Khanate. *Kresna Social Science and Humanities Research*, *3*, 175-179.

40. Muhiddinovich, B. I. (2022). In the Study of the History of the Kokand Khanate. *Eurasian Journal of History, Geography and Economics*, *6*, 68-71.

41. Burkhanov , I. . (2022). FROM THE HISTORY OF THE USE OF THE SCIENTIFIC HERITAGE OF KOKAND SCIENTISTS ASOMIDDIN URINBOEV. *International Bulletin of Medical Sciences and Clinical Research*, *2*(10), 63–67.

42. Хатамова, З. (2021, August). EXPENDITURE OF INCOME FROM TAXES AND LEVIES IN THE KOKAND KHANATE: https://doi. org/10.47100/conferences. v1i1. 1230. In RESEARCH SUPPORT CENTER CONFERENCES (No. 18.05).

43. Хатамова, З. Н. Особенности налоговой системы Кокандского ханства / З. Н. Хатамова. — Текст : непосредственный // Молодой ученый. — 2020. — № 5 (295). — С. 254-256. — URL: https://moluch.ru/archive/295/66918/

44. Nazirjonovna, H. Z., & Abdumannobovich, N. M. (2020). Tax system on the territory of kyrgyzstan during the Kokand Khanate. *ACADEMICIA: An International Multidisciplinary Research Journal*, *10*(6), 209-212.

45. Xatamova, Z. (2020). Expenditure of state funds replenished by taxes in the history of the kokand khanate. *EPRA International Journal of Research and Development (IJRD)*, *5*(3), 274-277.

46. Nazirjonovna, K. Z. ., & Odinakhan, A. . (2023). PEDAGOGICAL SKILLS AND THEIR TYPES. *JOURNAL OF SCIENCE, RESEARCH AND TEACHING*, *2*(5), 18–21.

47. Khatamova, Z. N., & Almamatova , N. (2023). SPECIFIC CHARACTERISTICS OF PEDAGOGICAL TECHNOLOGIES. *Innovative Development in Educational Activities*, *2*(9), 19–23

48. Nazirjonovna, K. Z. ., & Abduvaxitovich, A. A. . (2023). APPLICATION OF MODERN TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE IN EDUCATION AND ITS FUTURE . *IJTIMOIY FANLARDA INNOVASIYA ONLAYN ILMIY JURNALI*, *3*(5), 98–104.

49. Komilov, A., Xatamova, Z., Rustamov, I., Xolmatov, S., Arabboyev, X., & Ibragimov, N. Z. (2024, November). Increasing the sensitivity and selectivity of an optoelectronic gas analyzer. In *E3S Web of Conferences* (Vol. 508, p. 01009). EDP Sciences.

50. Rayimdjanova, O., Xatamova, Z., Rustamov, I., Xolmatov, S., Arabboyev, X., & Ibragimov, N. Z. (2024, November). Thermal converter for controlling horizontal wind speed and temperature. In *E3S Web of Conferences* (Vol. 508, p. 05004). EDP Sciences.

51. Nazirjonovna, K. Z. (2024). THE SIGNIFICANCE OF ZAKAT IN THE FINANCIAL SYSTEM OF THE KOKANDD KHAN. *Galaxy International Interdisciplinary Research Journal*, *12*(3), 100-105.

52. Nazirjonovna, K. Z. (2024). FROM THE HISTORY OF THE FINANCIAL SYSTEM OF THE KOKAND KHAN: CUSTOMS TAX AND OTHER COLLECTIONS. *Galaxy International Interdisciplinary Research Journal*, *12*(3), 94-99.

53. Nazirjonovna, K. Z. (2024). THE ISSUE OF CRAFTSMANSHIP IN THE FINANCIAL SYSTEM OF THE KOKAND KHANATE. *World Bulletin of Public Health*, *31*, 8-10.

54. Nazirjonovna, K. Z., & Otayorbek, A. (2023). THEORETICAL BASIS OF THE IMPLEMENTATION OF THE TURKISH EDUCATIONAL SYSTEM IN TEACHING LIGHT INDUSTRY SCIENCES. *Galaxy International Interdisciplinary Research Journal*, *11*(6), 346-350.