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MAKTABGACHA TA'LIMDA ZAMONAVIY TEXNOLOGIYALAR YORDAMIDA MATEMATIK TASAVVURLARNI RIVOJLANTIRISH

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Annotatsiya: Ushbu maqolada maktabgacha ta'limda zamonaviy texnologiyalar yordamida matematik tasavvurlarni rivojlantirish usullari yoritiladi. Bolalarning matematik tafakkurini shakllantirish va rivojlantirish uchun interaktiv vositalar, raqamli o'yinlar hamda zamonaviy didaktik yondashuvlardan foydalanishning ahamiyati tushuntiriladi.

Kalit so'zlar: Matematik tasavvur, zamonaviy texnologiyalar, interaktiv ta'lim, didaktik metodlar, maktabgacha ta'lim, raqamli o'yinlar, vizual materiallar.

Kirish

Maktabgacha yoshdagi bolalar uchun matematik tasavvurlarni shakllantirish ularning kelajakdagi bilim olish jarayoniga muhim tayyorgarlik bosqichi hisoblanadi. Zamonaviy texnologiyalar yordamida bu jarayon yanada qiziqarli, samarali va tezkor amalga oshirilishi mumkin. Interaktiv vositalar, raqamli texnologiyalar va o'yin shaklidagi o'qitish metodlari orqali bolalar sonlarni, shakllarni va miqdor tushunchalarini yanada oson o'zlashtiradilar. Ushbu maqolada matematik tafakkurni shakllantirishda zamonaviy texnologiyalarning o'rni va samarali metodlar haqida so'z yuritiladi.

Asosiy qism

1. Matematik tasavvurlarni rivojlantirishda zamonaviy texnologiyalarning ahamiyati

Zamonaviy texnologiyalar quyidagi jihatlari bilan bolalarning matematik tafakkurini shakllantirishda muhim rol o'ynaydi:

- Bolalarning vizual va amaliy qobiliyatlarini rivojlantirish;
- Matematik tushunchalarni interaktiv usullar orqali mustahkamlash;
- O'quv jarayonini qiziqarli va tushunarli qilish;
- Bolalarning mantiqiy fikrlash qobiliyatini oshirish;
- Mustaqil o'rganish va muammolarni hal qilish ko'nikmalarini shakllantirish.

2. Matematik tasavvurlarni rivojlantirish uchun zamonaviy texnologiyalar

Bugungi kunda maktabgacha ta'limda quyidagi texnologiyalar keng qo'llanilmoqda:

- **Interaktiv doskalar** – bolalarga jonli mashg'ulotlar orqali o'rganish imkonini beradi.
- **Raqamli o'yinlar** – bolalarning qiziqishini oshirib, ularning bilimlarini mustahkamlashga yordam beradi.
- **Mobil ilovalar** – maxsus dasturlar orqali bolalar mustaqil ravishda matematik topshiriqlarni bajara oladilar.
- **Virtual reallik texnologiyalari** – bolalarning fazoviy tafakkurini rivojlantirish uchun foydalaniladi.



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• **Elektron darsliklar va multimedia materiallar** – interaktiv mashg‘ulotlar orqali bilimlarni mustahkamlashga xizmat qiladi.

3. Zamonaviy texnologiyalar orqali o‘qitishning samarali usullari

Matematik tasavvurlarni rivojlantirish uchun quyidagi samarali metodlar qo‘llanilishi mumkin:

- **O‘yin metodlari** – bolalar o‘yin orqali tezroq va samaraliroq o‘rganadi.
- **Vizual materiallardan foydalanish** – grafikalar, animatsiyalar va jonli tasvirlar orqali tushunchalarni tushuntirish.
- **Eksperiment va interaktiv mashg‘ulotlar** – bolalar amaliy tajriba orqali bilimlarni o‘zlashtiradi.
- **Qayta aloqa tizimidan foydalanish** – bolalarning bilim darajasi doimiy ravishda baholanadi va o‘zlashtirish jarayoni nazorat qilinadi.
- **Differensial yondashuv** – har bir bolaning o‘ziga xos o‘rganish uslubiga moslashish.

4. Zamonaviy texnologiyalar yordamida bolalarning matematik qobiliyatlarini baholash

Bolalarning matematik tasavvurlarini baholashda quyidagi usullardan foydalanish mumkin:

- **Interaktiv testlar va topshiriqlar** – bolalarning bilim darajasini aniqlash.
- **Elektron kundaliklar va monitoring tizimlari** – bolaning o‘zlashtirish jarayonini kuzatish.
- **Ota-onalar bilan hamkorlik** – bolaning rivojlanishini nazorat qilish va kerakli ko‘rsatmalar berish.
- **Gamifikatsiya** – bolalar uchun qiziqarli topshiriqlar orqali ta‘lim jarayonini motivatsiyalash.

5. Ota-onalar va tarbiyachilarning roli

Zamonaviy texnologiyalar yordamida bolalarning matematik tasavvurlarini rivojlantirish jarayonida ota-onalar va tarbiyachilar muhim rol o‘ynaydi:

- **Bolalar bilan muntazam shug‘ullanish** – texnologik vositalarni to‘g‘ri tanlash va qo‘llash.
- **Bolalarni rag‘batlantirish** – motivatsiyani oshirish va qiziqishini saqlab qolish.
- **Ta‘lim resurslaridan to‘g‘ri foydalanish** – samarali va mos dasturlarni tanlash.
- **Kuzatuv va yordam** – bolaning o‘rganish jarayoniga faol ishtirok etish.

Xulosa

Maktabgacha yoshdagi bolalar uchun matematik tasavvurlarni rivojlantirishda zamonaviy texnologiyalar muhim ahamiyat kasb etadi. Interaktiv o‘yinlar, mobil ilovalar va boshqa innovatsion vositalar yordamida bolalar o‘z bilimlarini mustahkamlash bilan birga, qiziqarli va samarali o‘rganish jarayonidan bahramand bo‘ladilar. Pedagoglar va ota-onalar tomonidan texnologiyalarni to‘g‘ri qo‘llash orqali bolalarning kelajakdagi akademik muvaffaqiyatlari uchun mustahkam poydevor yaratiladi.



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ADABIYOTLAR:

1. O'ktam qizi Buxoro, S. M. (2022). BOLANING NUTQINI RIVOJLANTIRUVCHI O 'YINLAR. *PEDAGOGS jurnali*, 1(1), 484-486.
2. O'ktam qizi Shukurova, M. (2023). Speech grow up in training using interactive methods. *American Journal of Public Diplomacy and International Studies (2993-2157)*, 1(10), 357-360.
3. Oktam's, S. M. (2023). Methods and Tools of Speech Development of Small Group Children in Preschool Education Organization. *American Journal of Public Diplomacy and International Studies (2993-2157)*, 1(9), 104-108.
4. O'ktam qizi Shukurova, M. (2023). The importance of genres of folklore in the education of preschool children. *TECHNICAL SCIENCE RESEARCH IN UZBEKISTAN*, 1(5), 96-99.
5. Shukurova, M. (2023). METHODS AND METHODS OF INCREASING CHILDREN'S SPEECH IN A PRESCHOOL ORGANIZATION. *Modern Science and Research*, 2(10), 477-480.
6. Shukurova, M. O. K. (2024). Growing children's speech in the process of introducing them to the environment and nature. *Multidisciplinary Journal of Science and Technology*, 4(3), 130-135.
7. Shukurova, M. (2024). OILADA FARZAND TARBIYASIDA OTANING ROLI. *ZAMONAVIY TARAQQIYOTDA ILM-FAN VA MADANIYATNING O 'RNI*, 3(2), 162-167.
8. O'ktamovna, S. M. (2024). MAKTABGACHA TA'LIMDA TABIAT BURCHAGINI TAYYORLASH. *Multidisciplinary Journal of Science and Technology*, 4(3), 661-667.
9. O'ktamovna, S. M. (2024). EXTRACURRICULAR ACTIVITIES IN PRIMARY GRADES. *Multidisciplinary Journal of Science and Technology*, 4(3), 654-660.
10. O'ktamovna, S. M. (2024). PREPARATION OF THE NATURE CORNER IN PRESCHOOL EDUCATION. *Multidisciplinary Journal of Science and Technology*, 4(3), 675-681.
11. O'ktamovna, S. M. (2024). BOLALAR NUTQINING TOVUSH MADANIYATINI SHAKLLANTIRISH. *PEDAGOG*, 7(5), 48-55.
12. O'ktamovna, S. M. (2024). BOLALARNING IJTIMOY-EMOTSIONAL RIVOJLANISHINI QO 'LLAB-QUVVATLASH USULLARI. *Methods of applying innovative and digital technologies in the educational system*, 1(2), 223-228.
13. O'ktamovna, S. M. (2024). BOLALARDA INDIVIDUAL RIVOJLANISHNING NEVROLOGIK ASOSLARI. *Methods of applying innovative and digital technologies in the educational system*, 1(2), 211-216.
14. O'ktamovna, S. M. (2024). BOLALARDA HISSIY-INTELLEKTUAL RIVOJLANISH VA UNING TA'LIM JARAYONIGA TA'SIRI. *Methods of applying innovative and digital technologies in the educational system*, 1(2), 205-210.



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15. O'ktamovna, S. M. (2024). BOLALARDA NUTQ RIVOJLANISHI: NAZARIYA VA AMALIY YONDASHUVLAR. *Methods of applying innovative and digital technologies in the educational system*, 1(2), 217-222.

16. Shukurova, M., & Hoshimova, M. (2024). SAHNALASHTIRISH FAOLIYATI VOSITASIDA BOLALARNING IJTIMOYIY MOSLASHUVINI YO'LGA QO'YISH. *Modern Science and Research*, 3(11), 547-550.

17. Shukurova, M., & Artikova, N. (2024). TARBIYACHI NUTQI UCHUN ZARUR BO'LGAN PEDAGOGIK TALABLARNING AHAMIYATI. *Modern Science and Research*, 3(11), 530-533.

18. Шукурова, М. У. (2024). ПОДГОТОВКА УГОЛОКА ПРИРОДЫ В ДОШКОЛЬНОМ ОБРАЗОВАНИИ. *Multidisciplinary Journal of Science and Technology*, 4(3), 668-674.

19. SHUKUROVA, M. (2024). NEUROPEDAGOGY AS A FOUNDATION FOR INCREASING THE EFFECTIVENESS OF THE EDUCATIONAL PROCESS. *Mental Enlightenment Scientific-Methodological Journal*, 5(07), 1-8.

20. Tursunovna, B. G. (2024, May). UPDATING AND CONDUCTING THE QUALITY OF PRIMARY EDUCATION ON THE BASIS OF MODERN METHODS. In *Forum for Linguistic Studies* (Vol. 6, No. 1, pp. 242-248).

21. Baxronova, G. T. (2024). EGRA AND EGMA INTERNATIONAL ASSESSMENT PROGRAMS AND TEACHING PRIMARY CLASS STUDENTS TO THINK INDEPENDENTLY THROUGH THEM. *Ta'lim innovatsiyasi va integratsiyasi*, 12(2), 152-154.

22. Tursunovna, B. G. (2024). EGMA TADQIQOTI O 'QITISH VA TA'LIM OLIH SHAROITLARINI O 'RGANISH XALQARO TADQIQOTI. *Ta'lim innovatsiyasi va integratsiyasi*, 12(2), 146-148.

23. Jo'Rayeva, D. O. (2024). EDUCATIONAL VIEWS OF PEDAGOGUES TOWARDS THE ENVIRONMENT. *Экономика и социум*, (4-1 (119)), 194-197.

24. Narziyeva, S. (2023). PSYCHOLOGICAL VIEWS ON THE CHOICE OF PROFESSION. *Modern Science and Research*, 2(10), 333-336.

25. Rustamovna, N. S. (2023). UNDERSTANDING EMPATHY: AN ESSENTIAL COMPONENT OF HUMAN CONNECTION. *American Journal of Public Diplomacy and International Studies* (2993-2157), 1(10), 378-382.

26. Rustamovna, N. S. (2023). DEVELOPING EMPATHY IN STUDENTS. *Oriental Journal of Academic and Multidisciplinary Research*, 1(3), 127-131.

27. Rustamjonovna, N. S. (2024). O 'SMIRLARDA DEVIATSIYA KO 'RINISHLARI VA VUJUDGA KELTIRUVCHI OMILLARI. *PEDAGOGIK TADQIQOTLAR JURNALI*, 2(1), 171-175.

28. Rustamjonovna, N. S. (2024). THE PROBLEM OF AGE AND GENDER DIFFERENTIATION OF DEVIANT MORALITY. *THE THEORY OF RECENT SCIENTIFIC RESEARCH IN THE FIELD OF PEDAGOGY*, 2(22), 222-224.



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29. Rustamovna, N. S. (2024). O 'SPIRINLIK YOSHIDA EMPATIYANING NAMOYON BO 'LISHI VA UNING PSIXOLOGIK XUSUSIYATLARI. *PEDAGOG*, 7(5), 89-96.
30. Narziyeva, S. (2024). O 'SPIRINLIK YOSHIDA EMPATIYANING NAMOYON BO 'LISHI VA UNING PSIXOLOGIK XUSUSIYATLARI. *PEDAGOG*, 7(4), 320-327.
31. Toymurodov, A. (2023, December). MODERN INTERPRETATION OF PSYCHODIAGNOSTICS AND PSYCHOCORRECTION OF EXTREME SITUATIONS. In INTERNATIONAL SCIENTIFIC CONFERENCE" SCIENTIFIC ADVANCES AND INNOVATIVE APPROACHES" (Vol. 1, No. 5, pp. 71-79).
32. Toymurodov, A. (2023). BASICS OF PROVIDING PSYCHOLOGICAL SERVICES TO MILITARY PERSONNEL. Академические исследования в современной науке, 2(24), 148-152.
33. Shuhratovich, T. A. (2025). PSIXOLOGIK TESTLAR TURLARI VA ULARNI QANDAY QO'LLASH. Modern digital technologies in education: problems and prospects, 2(1), 8-15.
34. Abdurahmon, T. (2025). BOLALAR PSIXOLOGIYASINI O 'RGANISH ULARNING RIVOJLANISH JARAYONLARI. Modern digital technologies in education: problems and prospects, 2(1), 16-21.
35. Abdurahmon, T. (2025). STRESSNI EKSPERIMENTAL TAHLIL QILISH. *New modern researchers: modern proposals and solutions*, 2(1), 51-56.
36. Abdurahmon, T. (2025). XOTIRA VA ESLAB QOLISH JARAYONLARINI. *New modern researchers: modern proposals and solutions*, 2(1), 57-62.
37. Abdurahmon, T. (2025). PSIXOLOGIYADA QAROR QABUL QILISH JARAYONLARINI EKSPERIMENTAL TADQIQ QILISH. *New modern researchers: modern proposals and solutions*, 2(1), 1-7.
38. Abdurahmon, T. (2025). PSIXOLOGIYADA NEYROEKSPERIMENTLARNING AHAMIYATI. *New modern researchers: modern proposals and solutions*, 2(1), 14-20.
39. Abdurahmon, T. (2025). KOGNITIV PSIXOLOGIYA INSONNING ONG JARAYONLARI. *New modern researchers: modern proposals and solutions*, 2(1), 8-13.
40. Fattullayeva, M. M. (2024). O 'QUVCHILARNING KOMMUNIKATIV KOMPETENSIYALARINI SHAKLLANTIRISHDA ERTAKLAR O 'QITISHNING NAZARIY VA METODIK ASOSLARI. *PEDAGOG*, 7(4), 243-248.
41. Fattullayeva, M. (2024). O 'QUVCHILARNING SO 'Z BIRIKMASI, GAP USTIDA ISHLASH KO 'NIKMASINI O 'STIRISH. *Medicine, pedagogy and technology: theory and practice*, 2(9), 534-542.
42. Xaqqulova, D. (2024). ABDURAHMON GO 'ZAL-YASSAVIYSHUNOS. *PEDAGOG*, 7(6), 8-15.
43. Xaqqulova, D. (2024). ADABIYOTSHUNOS OLIM ABDURAHMON GO 'ZALNING TADQIQOTLARI XUSUSIDA. *PEDAGOG*, 7(5), 548-555.
44. XAQQULOVA, D. (2023). BADIYLIK MASALALARI TADQIQIDA OLIM MAHORATI. *Наука и технология в современном мире*, 2(5), 5-11.



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45. Abduvasiyevna, X. D. (2024). SO 'Z TUZILISHI VA SO 'Z YASASH. *The latest pedagogical and psychological innovations in education*, 1(2), 261-266.
46. Abduvasiyevna, X. D. (2024). NUTQ MADANIYATI VA OG 'ZAKI MULOQOT. *The latest pedagogical and psychological innovations in education*, 1(2), 255-260.
47. Abduvasiyevna, X. D. (2024). MATN TAHLILI VA MAZMUNNI TUSHUNISH. *The latest pedagogical and psychological innovations in education*, 1(2), 279-284.
48. Abduvasiyevna, X. D. (2024). GAP TUZILISHI VA UNING TURLARI. *The latest pedagogical and psychological innovations in education*, 1(2), 267-272.
49. Abduvasiyevna, X. D. (2024). ONA TILIDA IMLO QOIDALARI. *The latest pedagogical and psychological innovations in education*, 1(2), 273-278.
50. Numondjonovna, D. G. (2021). The use of interactive methods in forming the ecological worldview of preschool children. *Middle European Scientific Bulletin*, 11.
51. Numondjonovna, D. G. (2022). The Importance of Aesthetic Education in Comprehensive Education of Preschool Children. *International Journal of Discoveries and Innovations in Applied Sciences*, 2(2), 54-57.
52. Numondjonovna, D. G. (2021). The importance of using multimedia to expand children's worldwide during the activities. *Asian Journal Of Multidimensional Research*, 10(7), 28-31.
53. Davranova Gulbahor, N. (2022). Advantages of using modern information technologies in teaching russian language for primary school students. *American journal of social and humanitarian research*, 3(1), 333-338.
54. Davranova, G. N. (2022). Use of Information Technologies in Primary School Russian Lessons. *European journal of innovation in nonformal education*, 2(6), 73-78.
55. Numondjonovna, D. G. (2022). Maktabgacha va boshlang 'ich ta'lim tizimida sifat samaradorligini oshirishning innovatsion yondashuvi. *PEDAGOGS jurnali*, 1(1), 144-146.
56. Davranova, G. N. (2023, January). THE DEVELOPMENT OF PUPILS' SPEECH IN RUSSIAN LESSONS IN ELEMENTARY SCHOOL. In *INTERNATIONAL SCIENTIFIC CONFERENCE" INNOVATIVE TRENDS IN SCIENCE, PRACTICE AND EDUCATION"* (Vol. 2, No. 1, pp. 147-154).
57. Numondjonovna, D. G. (2022). Tabiat bilan tanishtirish orqali maktabgacha yoshdagi bolalarda ekologik madaniyatni rivojlantirish. *PEDAGOGS jurnali*, 1(1), 363-367.
58. Numondjonovna, D. G. (2024). SHAXSGA YO'NALTIRILGAN YONDASHUV ASOSIDAGI TA'LIMNING AHAMIYATI. *PEDAGOGIK TADQIQOTLAR JURNALI*, 2(1), 197-202.
59. Numondjonovna, D. G. (2024). FORM, METHOD, TOOLS OF USING INFORMATION AND COMMUNICATION TECHNOLOGIES IN TEACHING RUSSIAN IN PRIMARY SCHOOL PUPILS. *Miasto Przyszłości*, 47, 495-499.
60. Numondjonovna, D. G. (2022). Boshlang'ich sinf o'quvchilarining rus tilida lug'atlar bilan ishlash jarayonida kreativligini oshirish. *Pedagogs jurnali*, 1(1), 168-170.



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61. Davranova, G. N. (2023). Theoretical And Practical Aspects Of Applying Information Technology In Teaching The Russian Language. Innovative Development In The Global Science, 2(10), 106-111.

62. Ravshanovich, A. O. HISSIY ZO 'RIQISHLAR VA OBSESSIYALARDAN XALOS BO 'LISH USULLARI VA TAVSIYALAR. ЎЗБЕКИСТОНДА ИЛМИЙ ТАДҚИҚОТЛАР: ДАВРИЙ АНЖУМАНЛАР: 10-ҚИСМ, 87.

