

Raqamli texnologiyalarni o'qitish uchun samarali pedagogika

Z.A.Solixodjanov

Farg'ona davlat texnika universiteti

Annotatsiya: Raqamli texnologiyalarni bakalavriat o'quv dasturiga integratsiya qilish shunchaki yangi vositalarni qo'shishdan ko'proq narsani anglatadi; bu talab qilinadigan bilim va pedagogik yondashuv manzarisida tub o'zgarishni anglatadi. Ushbu fanlarni o'qitish an'anaviy ma'ruza asosidagi modellardan tashqari, yanada dinamik, talabaga yo'naltirilgan paradigmaga o'tishni talab qiladi. Ushbu maqolada raqamli texnologiyalarda chuqur, amaliy va uzoq muddatli kompetentsiyani rivojlantirish uchun eng samarali deb hisoblangan pedagogikaning nazariy asoslari va amaliy qo'llanmalari o'rganiladi. Unda muvaffaqiyat kontseptual tushunchani tajriba amaliyoti bilan bog'laydigan, muammolarni hal qilish qobiliyatini rivojlantiradigan va tez rivojlanayotgan ijtimoiy-texnik kontekstga mos keladigan pedagogikada ekanligi ta'kidlanadi. Konstruktivizm va joylashuvli o'qitishdan kelib chiqqan ta'lim nazariyasiga tayanib, maqolada loyihaga asoslangan o'rganish, kognitiv shogirdlik, tengdoshlar bilan o'qitish va haqiqiy baholash kabi strategiyalar ko'rib chiqiladi. U o'qituvchining ushbu dinamik muhitda fasilitator va hamkasb sifatidagi muhim rolini va texnik o'quv dasturiga axloqiy va refleksiv amaliyotni joriy etish zarurligini ko'rib chiqish bilan yakunlanadi.

Kalit so'zlar: raqamli savodxonlik, konstruktiv pedagogika, tajribaviy o'rganish, hisoblash fikrlashi, ta'lim texnologiyasi, o'quv dasturi dizayni

Effective pedagogy for teaching digital technologies

Z.A.Solikhodzhanov

Fergana State Technical University

Abstract: Integrating digital technologies into the undergraduate curriculum is more than just adding new tools; it represents a fundamental shift in the landscape of required knowledge and pedagogical approaches. Teaching these subjects requires a shift away from traditional lecture-based models to a more dynamic, student-centered paradigm. This article explores the theoretical foundations and practical applications of pedagogies that are considered the most effective for developing deep, practical, and long-term competence in digital technologies. It argues that success lies in pedagogies that connect conceptual understanding with experiential practice, develop problem-solving skills, and are relevant to the rapidly evolving socio-technical context. Drawing

on educational theory rooted in constructivism and situated learning, the article examines strategies such as project-based learning, cognitive apprenticeship, peer teaching, and authentic assessment. It concludes by considering the important role of the teacher as a facilitator and collaborator in this dynamic environment and the need to incorporate ethical and reflective practice into the technical curriculum.

Keywords: digital literacy, constructivist pedagogy, experiential learning, computational thinking, educational technology, curriculum design

Kirish

Zamonaviy bakalavr talabasi raqamli infratuzilma bilan to'yingan dunyoda harakatlanadi, ammo bu keng tarqalgan tanishlik ushbu texnologiyalarning asosiy tamoyillari, konstruktiv imkoniyatlari yoki ijtimoiy oqibatlarini chuqur tushunishga olib kelmaydi. Shuning uchun raqamli texnologiyalarni o'qitish vazifasi - kompyuter dasturlash va ma'lumotlar ilmidan tortib tarmoq boshqaruvi, kiberxavfsizlik va raqamli dizayngacha bo'lgan sohalarni qamrab oluvchi - oliy ta'limda noyob o'rin egallaydi. U passiv foydalanuvchilarni faol ijodkorlarga, tanqidiy tahlilchilarga va axloqiy amaliyotchilarga aylantirishi kerak. Bu o'zgarishga faqat deklarativ bilimlarni tarqatadigan pedagogika orqali erishib bo'lmaydi. Sintaksis, protokollar yoki dasturiy ta'minot xususiyatlarining statik uzatilishi ko'pincha yangi kontekstlarda muvaffaqiyatsizlikka uchragan mo'rt o'rganishga olib keladi, bu talaba kodlash misolini mukammal takrorlay olsa-da, biroz boshqacha muammoga yechim topa olmasa, yaqqol ko'rinib turadigan hodisa.

Qiyinchilik raqamli sohadagi o'zgarish tezligi bilan yanada kuchayadi. Vositalar, tizimlar va eng yaxshi amaliyotlar ma'lum texnik kontentni yillar, balki oylar ichida eskirishi mumkin bo'lgan sur'atlarda rivojlanmoqda. Natijada, asosiy maqsad ma'lum texnologiyalarni o'qitishdan texnologiyalarni qanday o'rganishni o'rgatishga; moslashuvchan tajriba, mustahkam muammolarni hal qilish tizimlari va yangi xususiyatlarga moslasha oladigan kontseptual aqliy modelni rivojlantirishga o'tadi. Ushbu maqolada ushbu sohadagi samarali pedagogika mavhum va aniqni bog'lash, talabalarni fanning haqiqiy amaliyotlariga jalb qilish va takroriy tajriba va mulohaza yuritish tafakkurini rivojlantirish qobiliyati bilan tavsiflanadi, deb ta'kidlanadi. Quyidagi muhokama ushbu qarashni qo'llab-quvvatlovchi ta'lim falsafalarini chuqur o'rganadi va ushbu falsafalarni sinfda, laboratoriyada va virtual o'quv muhitida hayotga tatbiq etadigan bir-biriga bog'liq pedagogik strategiyalar to'plamini bayon qiladi.

Raqamli texnologiyalarni samarali o'qitish konstruktivistik va ijtimoiy-madaniy o'rganish nazariyalariga asoslangan. Konstruktivistik nuqtai nazardan, bilim olinmaydi, balki o'quvchi tomonidan tajriba va mulohaza orqali faol ravishda shakllantiriladi. Raqamli texnologiyalarga nisbatan qo'llanilganda, bu talabalar

algoritmi uning tavsifini eshitish orqali chinakam tushunishmaydi degan ma'noni anglatadi; ular uni amalga oshirish, nosozliklarni tuzatish, uning bosqichlarini tasavvur qilish va ehtimol tengdoshlariga tushuntirish orqali tushunishadi. Bu jarayonga xos bo'lgan kognitiv kurash - muvaffaqiyatsiz dasturni nosozliklarni tuzatish yoki ma'lumotlar bazasi sxemasini loyihalashning "samarali kurashi" - minimallashtirilishi kerak bo'lgan to'siq emas, balki o'rganishning asosiy mexanizmi hisoblanadi. Bu joylashuvli o'rganish kontsepsiyasiga juda mos keladi, bu o'rganish uning mo'ljallangan foydalanish kontekstida sodir bo'lganda eng chuqurroq bo'ladi, deb ta'kidlaydi. Dasturlashni o'rganish shunchaki sikllar va shartli so'zlarni o'zlashtirish bilan bog'liq emas; bu dasturchi kabi fikrlashni, rejalashtirish, yozish, sinovdan o'tkazish, hamkorlik qilish va qayta ko'rib chiqishni o'z ichiga olgan dasturiy ta'minotni ishlab chiqish amaliyotida ishtirok etishni o'rganish bilan bog'liq.

Bundan tashqari, amaliyot hamjamiyati modeli juda dolzarbdir. Raqamli texnologiyalar dunyosi o'z-o'zidan hamkorlikka asoslangan bo'lib, forumlar, ochiq kodli loyihalar va jamoaviy rivojlanishga asoslangan. O'quvchilarni izolyatsiya qiladigan, bilim olishni faqat individual harakat sifatida ko'rib chiqadigan pedagogika professional amaliyotning muhim o'lchamini e'tibordan chetda qoldiradi. O'rganish qonuniy periferik ishtirokdan - ehtimol, mavjud kodni o'zgartirishdan yoki katta loyihaning kichik bir qismiga hissa qo'shishdan - jamiyatning nutqi va faoliyatida to'liqroq ishtirok etishga yo'naltirilgan traektoriya sifatida qoraladi. Ushbu nazariy nuqtai nazarlar birgalikda ta'limning "bank modeli"ga qarshi chiqadi, bunda bilim o'qituvchi tomonidan talabaga o'tkaziladi. Buning o'rniga, ular talabalar sohani belgilaydigan fikrlash va bajarish usullariga shogird bo'ladigan muhitlarni himoya qiladilar.

Loyihaga asoslangan ta'lim raqamli texnologiyalarni o'qitishning asosiy pedagogikasi bo'lib xizmat qiladi. Yaxshi ishlab chiqilgan loyiha o'rganish uchun joylashuvga ega, barqaror kontekstni ta'minlaydi. Talabalar kontsepsiyalarni alohida o'rganish o'rniga, ularni mazmunli maqsadga erishish uchun zarur vositalar sifatida ko'rishadi, masalan, oddiy veb-ilova yaratish, real dunyo ma'lumotlar to'plamini tahlil qilish yoki kichik biznes uchun xavfsiz tarmoqni loyihalash. Loyiha o'rganishni boshqaradi, sinfga asoslangan rag'batlantirishdan tashqari ichki motivatsiyani yaratadi. Bu real dunyo texnologik ishlarining murakkabligini aks ettiruvchi bir nechta ko'nikmalar va tushunchalarni birlashtirishni talab qiladi. Eng muhimi, loyiha aniq natijaga ega bo'lib, u kuchli fikr-mulohaza va qoniqish manbai bo'lib xizmat qiladi. Noaniq g'oyadan funktsional mahsulotga o'tish jarayoni loyiha doirasini aniqlash, takroriy rivojlanish va noaniqlikni boshqarishni o'rgatadi - har qanday o'ziga xos texnik kompetensiya kabi muhim ko'nikmalar. O'qituvchining roli kontent yetkazib beruvchidan loyiha me'mori va ustoziga o'tadi, tegishli doiraga ega, ammo ochiq

ko'rsatmalarni ishlab chiqadi va talabalarning kompetensiyasi o'sib borishi bilan kamayib boradigan asos yaratadi.

Kognitiv shogirdlik modeli mutaxassisning fikrlashini ko'rinadigan qiladi. An'anaviy shogirdlikda yangi boshlovchi usta hunarmandni hunar o'rganish uchun kuzatib turadi. Kognitiv shogirdlikda "hunar" muammolarni hal qilish, loyihalash va nosozliklarni tuzatishning ko'rinmas jarayonidir. O'qituvchi jonli kodlash sessiyasini namoyish qilishi mumkin, uning fikrlash jarayonini og'zaki ifodalaydi - "Men bu yerda xesh xaritasidan foydalanishni o'ylayapman, chunki menga kalit bo'yicha tezkor qidiruv kerak, lekin men xotira yukidan xavotirdaman, shuning uchun ikkala yondashuvni ham prototiplashtiraylik." Ushbu meta-kognitiv hikoya mutaxassis amaliyotini sinchkovlik bilan ochib beradi. Keyin o'qituvchi talabalarga o'xshash vazifalarni bajarishda murabbiylik qiladi, o'z vaqtida maslahatlar va fikr-mulohazalarni taqdim etadi. Nihoyat, o'quvchilar mustaqillikka erishganlarida o'qituvchi orqa fonga o'tadi, bu jarayon iskala deb nomlanadi. Ushbu pedagogika nazariy bilim va amaliy ko'nikma o'rtasidagi tafovutni bevosita hal qiladi va talabalarga nafaqat nima qilish kerakligini, balki nima qilish kerakligi haqida qanday o'ylash kerakligini ham ko'rsatadi.

Tengdoshlar bilan o'qitish va hamkorlikda o'qitish bilimlarni shakllantirishning ijtimoiy jihatidan foydalanadi. Masalan, "o'ylash-juftlashish-baham ko'rish" texnikasi kontseptual tushunishga kuchli qo'llanilishi mumkin. Asosiy g'oyani - masalan, qidiruv algoritmining mexanikasini taqdim etgandan so'ng, o'qituvchi puxta ishlab chiqilgan kontseptual savolni beradi. Talabalar avval individual javobga so'z berishadi, keyin qo'shnisi bilan o'z mulohazalarini muhokama qilishadi va nihoyat sinf bo'ylab muhokama qilishadi. Bu jarayon talabalarni o'z tushunchalarini ifoda etishga va himoya qilishga majbur qiladi, ko'pincha nozik noto'g'ri tushunchalarni ochib beradi. Agile dasturiy ta'minotni ishlab chiqishning asosiy qismi bo'lgan juftlik dasturlash kabi kengroq hamkorlikdagi ishlarda ikkita talaba bitta kompyuterda ishlaydi, biri kod yozishda "drayver" sifatida, ikkinchisi esa strategiyani ko'rib chiqish va xatolarni aniqlashda "navigator" sifatida ishlaydi. Ushbu tuzilma nafaqat kod sifatini yaxshilaydi, balki uzluksiz muloqotni rivojlantiradi, bilimlarni mustahkamlaydi va muloqot ko'nikmalarini rivojlantiradi. Sinf xonasi texnologiya sanoatining hamkorlikdagi tabiatini aks ettiruvchi bilimlar birgalikda qurilgan o'quvchilar jamoasiga aylanadi.

Raqamli texnologiyalar ta'limida baholashni shunchaki yakuniy o'lchov sifatida emas, balki o'quv jarayonining ajralmas qismi sifatida qayta ko'rib chiqish kerak. Authentic Assessment talabalarning malakasini real dunyodagi qiyinchiliklarni aks ettiruvchi vazifalar orqali baholaydi. Tarmoq protokollari bo'yicha ko'p tanlovli test o'rniga, authentic baholash talabalarga simulyatsiya qilingan tarmoq uzilishi tashxisini qo'yish va tuzatish vazifasini yuklashi mumkin, bu ulardan diagnostika vositalaridan

foydalanishni, jurnallarni sharhlashni va bilimlarini vaqt cheklovlari ostida qo'llashni talab qiladi. Talabalar o'z loyihalari, kod omborlari va aks ettiruvchi sharhlar to'plamini yaratadigan portfel baholash vaqt o'tishi bilan o'sishning yaxlit ko'rinishini ta'minlaydi. U jarayon, iteratsiya va professional shaxsni rivojlantirishni qadrlaydi.

O'quv jarayoni davomida taqdim etiladigan shakllantiruvchi fikr-mulohazalar juda muhimdir. Dasturlash topshiriqlaridagi birlik testlari kabi avtomatlashtirilgan fikr-mulohaza tizimlari kodning funktsional to'g'riligi haqida darhol va ob'ektiv ma'lumot beradi, bu esa talabalarga tez takrorlash imkonini beradi. Biroq, bu dizayn nafisligi, samaradorligi va uslub konventsionaliyalariga rioya qilish kabi yuqori darajadagi muammolar bo'yicha insoniy fikr-mulohazalar bilan to'ldirilishi kerak. Kasbiy amaliyot asosida modellashtirilgan kod sharhlari, bunda talabalar bir-birlarining ishlarini tuzilgan rubrikadan foydalanib tanqid qiladilar, bu ham sharhlovchi va sharhlovchi uchun kuchli o'rganish tajribasi, ham boy, ko'p qirrali fikr-mulohazalar manbai bo'lib xizmat qiladi. Baholashning maqsadi talabalarni reytinglashdan ularni yaxshilash uchun zarur bo'lgan ma'lumotlarni taqdim etishga o'tadi va shu bilan o'quv maqsadlarini bevosita qo'llab-quvvatlaydi.

Bu pedagogika o'qituvchining rolini sahnadagi donolikdan yon tomondagi yo'lboshchiga chuqur o'zgartirishni talab qiladi. O'qituvchi o'rganish tajribalarini yaratuvchi, haqiqiy kontekstlarni yaratuvchi, hamkorlikdagi suhbatni moderator va professional amaliyot va fikrlashni modellashtiruvchi ustozga aylanadi. Bu rol pedagogik mazmun bilimlarini talab qiladi - talabalar ushbu aniq fanni qanday o'rganishlarini chuqur tushunish, jumladan, keng tarqalgan noto'g'ri tushunchalar (masalan, ob'ekt havolalarini yoki rekursiyani noto'g'ri tushunish) va ularni hal qilishning samarali strategiyalari. Ehtimol, eng qiyini, bu o'qituvchidan birgalikda o'rganish pozitsiyasini qabul qilishni talab qiladi. Juda tez o'zgarib borayotgan sohada hech kim barcha bilimlarning yagona ombori bo'la olmaydi. O'qituvchi talabalar bilan birga yangi asosni o'rganishi mumkin, bu mutaxassisning o'rganish jarayonida qanday ishlashini modellashtiradi: hujjatlarni qidirish, kichik misollar bilan tajriba o'tkazish va dastlabki chalkashliklarni davom ettirish. Bu zaiflik zaiflik emas, balki umrbod o'rganishning kuchli namoyishidir.

Nihoyat, raqamli texnologiyalar uchun samarali pedagogika axloqiy va aks ettirish amaliyotini ataylab birlashtirishi kerak. Texnologiya qiymatga bog'liq emas; u o'z yaratuvchilarining tarafkashliklarini kodlaydi va jamiyatga chuqur ta'sir ko'rsatadi. Faqat "qanday" ni o'rgatadigan o'quv dasturi "nima uchun" va "nima maqsadda" degan savollarsiz nuqsonli. Pedagogika algoritmning ijtimoiy ta'sirini, ma'lumotlarni to'plashning axloqiy oqibatlarini, hisoblashning ekologik xarajatlarini va kirish imkoniyati va raqamli tenglik masalalarini so'roq qilish uchun maydonlar yaratishi kerak. Texnologik yutuqlar va muvaffaqiyatsizliklarning amaliy tadqiqotlari, siyosat bo'yicha munozaralar va aks ettirish yozuvlari bu muhim o'lchovni o'z ichiga olishi

mumkin. Aks ettirishning o'zi asosiy ko'nikmadir; talabalarni qiyinchiliklar, yutuqlar va tushunchalarni hujjatlashtiradigan o'quv jurnallarini yuritishga undash bilimlarni mustahkamlashga va metakognitiv xabardorlikni rivojlantirishga yordam beradi, tajribani tajribaga aylantiradi.

Xulosa

Raqamli texnologiyalarni samarali o'qitish - bu passiv bilim uzatishni rad etib, faol, joylashuvga asoslangan va ijtimoiy kompetensiyani qurish foydasiga murakkab, dinamik harakatdir. Bu yerda ko'rib chiqilgan pedagogika - loyihaga asoslangan o'rganish, kognitiv shogirdlik, tengdoshlar bilan o'qitish va haqiqiy baholash - alohida vositalar emas, balki izchil ta'lim falsafasining o'zaro bog'liq tarkibiy qismlaridir. Ularni talabalarni fanning haqiqiy ishlariga jalb qilish, ekspert fikrlashini ko'rinarli qilish va hamkorlikdagi va refleksiv o'rganish madaniyatini rivojlantirishga sodiqlik birlashtiradi.

Pirovard maqsad nafaqat bugungi vositalarni yaxshi biladigan, balki moslashuvchan, topqir va axloqiy muammolarni hal qiluvchi bitiruvchilarni tarbiyalashdir. Ular ertangi texnologiyalarni o'rganish uchun kontseptual asoslarga, qurish va tanqid qilishning amaliy ko'nikmalariga va o'z ishlarini foydali maqsadlarga yo'naltirish uchun ijtimoiy-texnik xabardorlikka ega bo'lishlari kerak. Raqamli texnologiyalar inson faoliyatining har bir jabhasini o'zgartirishda davom etar ekan, ularni o'qitish uchun qo'llaniladigan pedagogika chuqur mas'uliyatni o'z zimmasiga oladi. Talabaga yo'naltirilgan, tajribaga asoslangan va mulohazakor yondashuvlarni qo'llash orqali o'qituvchilar keyingi avlodga nafaqat raqamli dunyoda harakat qilish, balki uni tushunish, shakllantirish va insoniylashtirish imkoniyatini berishlari mumkin. Sinf xonasi professional va fuqarolik landshaftining mikrokosmiga aylanadi, talabalarni nafaqat birinchi ishlariga, balki tobora raqamli jamiyatda umrbod mazmunli hissa qo'shishga tayyorlaydi.

Foydalanilgan adabiyotlar

1. Turgunbaev, R. (2025). From Perception to Action with Integrated VLA Systems. *Technical Science Integrated Research*, 1(6), 11-17.
2. Kamilov, K. M., Khakimova, Z. K., Shermatov, A. A., & Jakhongirov, I. J. (2025). Digital monitoring and diagnostic optimization of ocular pathologies in the elderly population. *Technical Science Integrated Research*, 1(6), 23-28.
3. Uzoqjonov, M., & Mirzakarimova, M. (2025). The role and significance of artificial intelligence in modern society. *Technical Science Integrated Research*, 1(6), 8-10.
4. Ahmedov, A. B. (2025). The impact of artificial intelligence on production efficiency in the digital economy. *Technical Science Integrated Research*, 1(6), 3-7.

5. kizi Akhmatjonova, U. L. (2025). Hidden contour line: meaning and use. *Technical Science Integrated Research*, 1(6), 18-22.
6. Egamberganova, Z. (2025). The digitally empowered library. *Technical Science Integrated Research*, 1(5), 29-35.
7. Turgunbaev, R. (2025). A project-based learning framework for teaching distributed data processing. *Technical Science Integrated Research*, 1(5), 3-7.
8. Makhkamova, G. T. (2025). Clinical and diagnostic features of respiratory diseases of combined etiology in children. *Technical Science Integrated Research*, 1(5), 21-24.
9. Xo'jjiyev, M. Y., & Bozorova, F. J. R. (2025). The role of pumpkin seed oil in slowing lipid oxidation in functional beverages and its kinetic models. *Technical Science Integrated Research*, 1(5), 25-28.
10. Tajibayev, B. J. (2025). Methods of providing psychological assistance to children after an earthquake. *Technical Science Integrated Research*, 1(5), 36-38.
11. qizi Valijonova, H. S. (2025). Innovative approach to the implementation of bim technologies in architectural and urban planning projects. *Technical Science Integrated Research*, 1(5), 12-16.
12. qizi Nabijonova, C. I. (2025). The formation of pilgrimage tourism under the influence of natural factors. *Technical Science Integrated Research*, 1(5), 17-20.
13. Urazmatov, J., & Raxmatullayev, O. R. (2025). The impact of preferential loans on private entrepreneurship, small business possibilities expansion factor. *Technical Science Integrated Research*, 1(4), 3-6.
14. To'rayeva, D. M. (2025). Developing Students' Communicative Skills through Extra-Linguistic Sources. *Technical Science Integrated Research*, 1(4), 7-10.
15. Mullayeva, M. K. (2025). Ways to develop speech culture in future teachers through poetic works. *Technical Science Integrated Research*, 1(4), 11-14.
16. ogli Juraboyev, A. T. (2025). Organization of recreational facilities in the mountainous territories of Uzbekistan. *Technical Science Integrated Research*, 1(4), 15-19.
17. Qosimjonov, S. A. (2025). Scientometric indicators as tools for evaluating innovation and research productivity. *Technical Science Integrated Research*, 1(3), 24-29.
18. Melijonov, J. S. (2025). The dynamics of citation networks and patterns of scholarly influence. *Technical Science Integrated Research*, 1(3), 15-20.
19. Urozov, M. K., Barotova, U., & Fayziyeva, M. (2025). Agrotechnology of hemp cultivation and the process of fiber extraction. *Technical Science Integrated Research*, 1(3), 21-23.
20. Ganiev, I. G., & Muradov, Z. (2025). Global issue of ageing reinforced concrete bridge infrastructure. *Technical Science Integrated Research*, 1(3), 3-9.

21. Ganiev, I. G., & Muradov, Z. (2025). Failure mechanisms of reinforced concrete bridges. *Technical Science Integrated Research*, 1(3), 10-14.
22. Turgunbaev, R. (2025). Rule-based reasoning and its role in intelligent decision making. *Technical Science Integrated Research*, 1(2), 11-14.
23. Turgunbaev, R. (2025). CORE DATABASE COMPETENCIES FOR LIBRARY STUDENTS. *European Review of Contemporary Arts and Humanities*, 1(5), 104-111.
24. Jurayev, I. (2025). A SYSTEMATIC PEDAGOGICAL APPROACH TO MAQOM ENCULTURATION IN UNDERGRADUATE VOCAL STUDIES. *European Review of Contemporary Arts and Humanities*, 1(5), 34-41.
25. Ktaybekova, D. J. (2025). METHODOLOGICAL APPROACHES APPROPRIATE TO AGE CHARACTERISTICS IN THE ACQUISITION OF DUTOR CREATIVITY AND PERFORMANCE SKILLS. *European Review of Contemporary Arts and Humanities*, 1(5), 9-14.
26. Berdikhanova, D. M. (2025). PEDAGOGICAL MECHANISMS FOR DEVELOPING STUDENTS' ARTISTIC THINKING IN DUTOR PERFORMANCE. *European Review of Contemporary Arts and Humanities*, 1(5), 4-8.
27. Xakimxo'ja qizi Odilova, M. (2025). MODERN APPROACH AND IMPORTANCE OF DRAWING TEACHING. *European Review of Contemporary Arts and Humanities*, 1(5), 83-86.
28. Sattarov, F. I. (2025). THE FORMATION OF COLORS IN NATURE AND THEIR CHARACTERISTICS OF CHANGE. *European Review of Contemporary Arts and Humanities*, 1(5), 70-73.
29. Turg'unboy qizi Karimjonova, D. (2025). FINE ART OF UZBEKISTAN. *European Review of Contemporary Arts and Humanities*, 1(5), 29-33.
30. Kurbanova, M. M. (2025). COMPARATIVE ANALYSIS OF EASTERN AND WESTERN ORCHESTRAL TRADITIONS. *European Review of Contemporary Arts and Humanities*, 1(5), 55-59.
31. Isaqov, S. S. (2025). NONVERBAL COMMUNICATION AND COHESION IN THE ORCHESTRAL ENSEMBLE. *European Review of Contemporary Arts and Humanities*, 1(5), 112-115.
32. Ibragimov, S. (2025). TEACHING ACADEMIC WRITING WITH CHATGPT: OPPORTUNITIES AND LIMITATIONS. *European Review of Contemporary Arts and Humanities*, 1(5), 92-96.
33. Narmatova, A. P. (2025). DEVELOPING COUNTRY-SPECIFIC CULTURAL COMPETENCE IN GERMAN LANGUAGE LEARNERS THROUGH LITERARY TEXTS. *European Review of Contemporary Arts and Humanities*, 1(5), 97-103.

34. Qurbonova, S. (2025). ANALYSIS OF ORNAMENTATION IN UZBEK MAQOM VOCAL PERFORMANCE. *European Review of Contemporary Arts and Humanities*, 1(5), 15-19.
35. Muminov, M. (2025). TRANSMISSION OF SHASHMAQOM REPERTOIRE IN CONTEMPORARY MASTER-STUDENT RELATIONSHIPS. *European Review of Contemporary Arts and Humanities*, 1(5), 60-64.
36. Akhrorova, M. (2025). THE CONCEPT OF TRAGIC FATE IN COMPARATIVE LITERATURE: EASTERN AND WESTERN PERSPECTIVES. *European Review of Contemporary Arts and Humanities*, 1(5), 46-50.
37. qizi Oxunjonova, G. Z. O. (2025). METHODS OF DEVELOPING STUDENTS'SPATIAL THINKING ABILITIES IN DRAWING LESSONS. *European Review of Contemporary Arts and Humanities*, 1(5), 87-91.
38. qizi Rahimjonova, N. B. (2025). EFFECTIVENESS OF USING DIGITAL TECHNOLOGIES IN DRAWING. *European Review of Contemporary Arts and Humanities*, 1(5), 78-82.
39. qizi Boyigitova, G. B. (2025). CONNECTIONS AND ITS TYPES. *European Review of Contemporary Arts and Humanities*, 1(5), 65-69.
40. qizi Xabibullayeva, K. Z. (2025). SHEARING AND ITS IMPORTANCE IN DRAWINGS. *European Review of Contemporary Arts and Humanities*, 1(5), 116-121.
41. qizi Amoniddinova, I. B. (2025). RESTORATION OF PAINTING. *European Review of Contemporary Arts and Humanities*, 1(5), 51-54.
42. qizi G'aybullayeva, T. O. (2025). STAGES OF CREATING A COMPLEX STILL LIFE COMPOSITION IN PAINTING. *European Review of Contemporary Arts and Humanities*, 1(5), 74-77.
43. Boboyev, V. (2025). MICROTONAL INTONATION AND ORNAMENTATION IN THE KASHKAR RUBAB MAQOM REPERTOIRE. *European Review of Contemporary Arts and Humanities*, 1(4), 35-44.
44. Mustafoev, S. M. (2025). THE INTERCONNECTION BETWEEN SOUNDS, MUSICAL MEMORY, AND THE SENSE OF MELODY AND HARMONY. *European Review of Contemporary Arts and Humanities*, 1(4), 3-8.
45. Egamberganova, Z. (2025). INTEGRATING RFID WITH SMART SHELVES AND ROBOTIC RETRIEVAL SYSTEMS FOR THE AUTONOMOUS LIBRARY. *European Review of Contemporary Arts and Humanities*, 1(4), 45-50.
46. Mustafoev, S. M. (2025). THE LOCALIZATION OF THE FRONTAL AND PARIETAL AREAS OF REPRODUCTION IN CLASSICAL ARTISTS AND MUSICIANS. *European Review of Contemporary Arts and Humanities*, 1(4), 9-13.
47. Ma'murjon qizi Khatamkulova, Z. (2025). CHALLENGES OF IMPLEMENTING STEAM IN ENGLISH LANGUAGE CLASSES. *European Review of Contemporary Arts and Humanities*, 1(4), 14-17.

48. Xo‘jjiyev, M. Y., & Bozorova, F. J. R. (2025). METROLOGICAL LIMITS OF ACCURACY OF PUMPKIN SEED OIL ADDITION TO FUNCTIONAL DRINKS. *European Review of Contemporary Arts and Humanities*, 1(4), 23-26.

49. ogli Oktyabrov, M. A. (2025). THE EMOTIONAL EXPRESSION OF ARTISTS THROUGH COLORS AND THE PSYCHOLOGICAL EFFECT OF COLORS IN ARTWORKS. *European Review of Contemporary Arts and Humanities*, 1(4), 30-34.

50. Abdunabiyeva, M. (2025). THE CULTURAL IDENTITY AND AESTHETIC EXPRESSION IN UZBEK NATIONAL DANCE ART. *European Review of Contemporary Arts and Humanities*, 1(3), 18-24.

51. Mirzaitova, M., & Astanakulov, O. (2025). CURRENT STATE OF INVESTMENT ACTIVITY IN TOURISM ORGANIZATIONS. *European Review of Contemporary Arts and Humanities*, 1(3), 14-17.

52. ogli Muqimov, S. Z. (2025). MUSIC AND NEUROPHYSIOLOGY: HOW DOES MUSIC CHANGE BRAIN ACTIVITY?. *European Review of Contemporary Arts and Humanities*, 1(3), 3-7.

53. ogli Muqimov, S. Z. (2025). INTERPRETING REPETITION AND VARIATION IN DIGITAL MUSIC: FROM ALGORITHMS TO ARTISTIC EXPRESSION. *European Review of Contemporary Arts and Humanities*, 1(3), 8-13.

54. Egamberdiyeva, Z. (2025). LIBRARIES AS CENTERS OF LIFELONG LEARNING AND COMMUNITY ENGAGEMENT. *European Review of Contemporary Arts and Humanities*, 1(2), 3-7.

55. Sharobiddinova, M. (2025). THE ROLE OF UZBEK MUSICAL INSTRUMENTS IN PEDAGOGY, PERFORMANCE, AND CULTURAL IDENTITY. *European Review of Contemporary Arts and Humanities*, 1(2), 12-16.

56. Turanov, D. A. (2025). PERSPECTIVES AND RISKS OF ARTIFICIAL INTELLIGENCE IN THE JUDICIAL SYSTEM OF UZBEKISTAN IN THE CONTEXT OF INTERNATIONAL EXPERIENCE. *European Review of Contemporary Arts and Humanities*, 1(2), 8-11.

57. Kurbanova, A. K. (2025). Treatment of periodontosis. *Academic Journal of Science, Technology and Education*, 1(4), 22-27.

58. Turgunbaev, R. (2025). Training dynamics in modern neural network optimization. *Academic Journal of Science, Technology and Education*, 1(8), 51-57.

59. Oripov, B. B. (2025). Ideals of the third renaissance and their artistic expression in the fine art of Uzbekistan. *Academic Journal of Science, Technology and Education*, 1(8), 28-32.

60. qizi Ergashaliyeva, M. X. (2025). The importance of composition in landscape painting. *Academic Journal of Science, Technology and Education*, 1(8), 33-36.

61. qizi Nosirova, S. R. (2025). Stages of development of graphic design in Uzbekistan. *Academic Journal of Science, Technology and Education*, 1(8), 37-40.

62. Fayziyev, A. N. (2025). Clinic of immunogenetic conditions of juvenile rheumatoid arthritis in children. *Academic Journal of Science, Technology and Education*, 1(8), 11-15.

63. Fayziyev, A. N. (2025). Immunogenetic markers and clinical expression in juvenile rheumatoid arthritis. *Academic Journal of Science, Technology and Education*, 1(8), 20-24.

64. Kholiqova, M. K. (2025). Methodology for Implementing Project-Based Learning in Developing Independent and Creative Thinking of Students. *Academic Journal of Science, Technology and Education*, 1(8), 67-75.

65. Inogamova, N. (2025). The use of artificial intelligence for positive pedagogical purposes in teaching french as a foreign language to students of international law and international economic relations. *Academic Journal of Science, Technology and Education*, 1(8), 25-27.

66. Djuraeva, Z. (2025). Cultural and lexical features of gastronomic metaphors. *Academic Journal of Science, Technology and Education*, 1(8), 76-79.

67. Jurayeva, S. (2025). Fashion design as a self-branding strategy: methods of personal image building by media influencers. *Academic Journal of Science, Technology and Education*, 1(8), 3-5.

68. Ruziokhunov, D., & Yuldasheva, U. (2025). The role of government tax regulations on attracting foreign investments. *Academic Journal of Science, Technology and Education*, 1(8), 6-10.

69. Djuraeva, Z. (2025). Rendering the names of dishes in French and Uzbek and their comparative analysis. *Academic Journal of Science, Technology and Education*, 1(8), 80-82.