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AN INTEGRATIVE APPROACH TO THE FORMATION OF PROFESSIONAL COMPETENCE IN TECHNICAL STUDENTS
TEXNIKA YO‘NALISHIDAGI TALABALARDA KASBIY KOMPETENSIYANI SHAKLLANTIRISHDA INTEGRATSION YONDASHUV

Muallif: **Voxobova Sarvinoz Maxamatkarim qizi**
Andijon mashinasozlik instituti, magistrant

Abstract: This thesis analyzes the role and importance of an integrative approach in developing professional competence among technical students. It discusses the interconnection between academic subjects, the integration of theory and practice, and the use of modern pedagogical technologies to enhance students’ professional skills.

Annotatsiya: Ushbu tezisda texnika yo‘nalishidagi talabalarda kasbiy kompetensiyani shakllantirish jarayonida integratsion yondashuvning o‘rni va ahamiyati tahlil qilinadi. O‘quv fanlari o‘rtasidagi uzviy bog‘liqlikni ta’minlash, nazariya va amaliyotni uyg‘unlashtirish, shuningdek, zamonaviy pedagogik texnologiyalar orqali talabalarda kasbiy ko‘nikmalarni rivojlantirish masalalari yoritilgan.

Keywords: Professional competence, integrative approach, technical education, innovative methods, creative thinking, independent learning.

Kalit so‘zlar: Kasbiy kompetensiya, integratsion yondashuv, texnik ta’lim, innovatsion metodlar, ijodiy fikrlash, mustaqil ta’lim.

Main part

In the 21st century, the issue of developing professional competence in education has become urgent, especially for students of technical fields. Professional competence is not only knowledge but also the ability to apply it in practice, make independent decisions in problem situations, and work effectively in a team.

Nowadays, teaching technical disciplines requires an integrative approach, which harmonizes subjects, strengthens interdisciplinary connections, and fosters systematic thinking.

For instance, when “Mechanical Engineering Technology” is taught in integration with “Materials Science,” “Physics,” and “Information Technology,” students learn to apply theoretical knowledge to practical problems.

The integrative approach also uses a competency-based model. Students’ knowledge, skills, and abilities are assessed and aligned with real production tasks.

Methods such as dual education, project-based learning, problem-based learning, and case study are recommended for implementation.

Practical training is crucial: laboratory work, industrial practice, and research projects help students convert theory into real-world experience.

Moreover, this approach stimulates independent learning, with the teacher acting as a facilitator rather than providing ready-made solutions.

Modern technologies, such as virtual labs, 3D modeling software, and online learning platforms, further enhance integration.

As a result, an educational process based on an integrative approach develops deep professional competence, independent thinking, and creativity in technical students.

Asosiy qism

Hozirgi davrda ta’lim tizimida kasbiy kompetensiyani shakllantirish masalasi dolzarb bo‘lib, ayniqsa texnik yo‘nalishdagi talabalar uchun muhim ahamiyat kasb etadi. Kasbiy kompetensiya — bu nafaqat bilim, balki ularni amaliyotda qo‘llay olish, muammoli vaziyatlarda mustaqil qaror qabul qilish, hamda jamoaviy ishlash ko‘nikmasidir.

Integratsion yondashuv o‘quv fanlarini bir-biri bilan uyg‘unlashtirish, fanlararo aloqalarni kuchaytirish, hamda talabalarda tizimli fikrlashni shakllantirishga xizmat qiladi.

Masalan, “Mashinasozlik texnologiyasi” fani “Materialshunoslik”, “Fizika”, “Axborot texnologiyalari” bilan integratsiyalashgan holda o‘qitilganda, talaba nazariy bilimlarni amaliy muammolar yechimida qo‘llashni o‘rganadi.

Bunday yondashuvni amalga oshirish uchun dual ta’lim, loyiha asosida o‘qitish, problem-based learning va case study metodlaridan foydalanish tavsiya etiladi.

Amaliy mashg‘ulotlar (laboratoriya ishlari, ishlab chiqarish amaliyoti, ilmiy loyihalar) talabaning nazariy bilimlarini real tajribaga aylantirishga yordam beradi.

Shuningdek, integratsion yondashuv talabalarning mustaqil ta’lim faoliyatini faollashtiradi, o‘qituvchi bu jarayonda fasilitator rolini bajaradi.

Zamonaviy texnologiyalar (virtual laboratoriyalar, 3D-modellashtirish dasturlari, onlayn o‘quv platformalari) integratsiyani kuchaytiradi.

Natijada, integratsion yondashuv asosida tashkil etilgan ta’lim jarayoni texnik yo‘nalishdagi talabalarda chuqur kasbiy kompetensiyani, mustaqil fikrlashni va ijodkorlikni rivojlantiradi.

Conclusion

The integrative approach is an effective tool for developing professional competence in technical education. It strengthens interdisciplinary connections, integrates theory with practice, and encourages independent learning among students. To enhance the competitiveness of future engineers, it is necessary to widely implement the integrative approach in the education system.

Xulosa

Integratsion yondashuv texnik ta’limda kasbiy kompetensiyani shakllantirishning samarali vositasidir. U fanlararo bog‘liqlikni kuchaytiradi, nazariy bilimni amaliyot bilan uyg‘unlashtiradi va talabalarning mustaqil ta’lim faoliyatini rag‘batlantiradi.

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