

Advancing ICT competence in the digital era: future directions in higher education

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Annotation. The article examines the concept of Information and Communication Technology (ICT) competence and its crucial role in the contemporary digital landscape, particularly in higher education establishments. It underscores the integration of ICT in both academic and professional training, analyzing how digital tools enhance pedagogical methodologies and skill acquisition in language education and translation studies. The discussion explores theoretical frameworks on ICT literacy, its implementation in modern educational settings, and the necessity for higher education institutions to embed ICT instruction within language education and translation studies curricula. The paper argues that ICT competence is fundamental to academic success and professional excellence, especially highlighting the increasing digitalization of linguistic and intercultural communication.

Keywords: ICT competence, digital literacy, higher education, language education, translation studies, technological integration, professional development

Развитие ИКТ-компетенций в цифровую эпоху: направления в сфере высшего образования

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Аннотация. В данной статье рассматривается концепция компетенции в области информационно-коммуникационных технологий (ИКТ) и ее важнейшая роль в современном цифровом ландшафте, особенно в высших учебных заведениях. В ней подчеркивается интеграция ИКТ как в академическую, так и в профессиональную подготовку, анализируется, как цифровые инструменты способствуют совершенствованию педагогических методик и приобретению навыков в языковом образовании и переводе. Рассматриваются теоретические основы ИКТ-грамотности, ее внедрение в современную образовательную среду и необходимость для высших учебных заведений внедрять обучение ИКТ в учебные программы по языковому образованию и переводоведению. В статье утверждается, что ИКТ-компетентность является основополагающим условием академического успеха и профессионального мастерства, особенно в условиях растущей цифровизации языковой и межкультурной коммуникации.

Ключевые слова: ИКТ-компетентность, цифровая грамотность, высшее образование, языковое образование, переводоведение, технологическая интеграция, профессиональное развитие

Raqamli davrda AKT kompetentsiyasini rivojlantirish: oliy ta'limning kelajakdagi yo'nalishlari

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Annotatsiya. Ushbu maqolada axborot-kommunikatsiya texnologiyalari (AKT) sohasidagi kompetensiya tushunchasi va uning zamonaviy raqamli muhitda, ayniqsa oliy ta'lim muassasalarida tutgan o'rni tahlil qilinadi. Maqola AKTning akademik, hamda kasbiy tayyorgarlikka integratsiyasining

muhimligini ko'rib chiqadi, shuningdek, raqamli vositalarning xorijiy tillarni o'rgatish va tarjimashunoslikda pedagogik usullarni takomillashtirish va ko'nikmalarni shakllantirishdagi rolini o'rganadi. AKT savodxonligining nazariy asoslari, uni zamonaviy ta'lim muhitiga joriy etish masalalari, bundan tashqari, oliy ta'lim muassasalarining til ta'limi va tarjimashunoslik bo'yicha o'quv dasturlariga AKT o'qitishni kiritish zarurati ko'rib chiqiladi. Maqolada AKT kompetentligi akademik muvaffaqiyat va kasbiy mahoratning asosiy sharti ekanligi ta'kidlanadi, til va madaniyatlararo muloqotning tobora raqamlashib borayotgan hozirgi sharoitda bu yanada muhim ahamiyat kasb etilishi bayon etiladi.

Kalit so'zlar: *AKT kompetensiyasi, raqamli savodxonlik, oliy ta'lim, xorijiy til ta'limi, tarjimashunoslik, texnologik integratsiya, kasbiy rivojlanish*

The digital era has ushered in unprecedented changes in education, particularly in the fields of language teaching and translation studies. The rapid advancement of Information and Communication Technologies (ICT) has transformed the landscape of higher education, particularly in the fields of language teaching and translation studies in Uzbekistan. As educators develop this new landscape, it is critical to emphasize the development of ICT competence among students to guarantee that they are equipped for the challenges of the digital era. Higher education institutions may better prepare students for a digital environment by adopting innovative technology and educational methods. This includes incorporating online platforms for language learning, utilizing translation software, and providing opportunities for virtual collaboration with peers from around the world. By embracing these advancements, educators can ensure that students are not only proficient in their chosen field of study but also well-prepared for the demands of an increasingly interconnected global world.

The integration of ICT into language learning and translation studies disciplines has not only expanded access to resources but also revolutionized pedagogical approaches. In Uzbekistan, the ongoing educational reforms under the "Digital Uzbekistan 2030" strategy have emphasized the importance of ICT in modernizing higher education (Decree of the President of the Republic of Uzbekistan No. PF-6079 dated October 5, 2020). This paper examines current trends in ICT integration, drawing on Uzbekistan's experiences and best practices, to identify future directions for advancing ICT competence in language teaching and translation studies. The paper concludes by recommending specific actions and strategies to promote the effective implementation of ICT in language teaching and translation studies.

ICT competencies are a subset of digital literacy essential for functioning in various professional activities and educational levels. Assessment involves defining target activities suitable for different environments, ranging from home to workplace. It includes skills like web navigation, email usage, and office tools. Future evaluations may include automatic scoring of natural language responses and other real-life tasks (Miguel, 2014). ICT competency includes a variety of abilities, such as digital literacy, information literacy, and technological proficiency. Digital literacy refers to the ability to use digital tools and platforms effectively, while information literacy involves the capacity to locate, evaluate, and use information critically (Bertrand, 2022). Technological proficiency is the ability to use and adapt new technologies. Together, these skills form the foundation of ICT competence, which is essential for navigating the digital landscape (Tien, 2024) and succeeding in today's interconnected world.

In language education and translation studies, ICT expertise is required for conducting research, accessing resources, and connecting with others in a digital environment. ICT competence is crucial for both students and educators in order to effectively communicate, collaborate, and engage with diverse perspectives.

Many scientists recognize the value of implementing ICT in the teaching process. They argue that incorporating technology into the classroom may improve learning outcomes and better prepare students for the demands of the modern workforce. Integrating ICT tools and platforms helps educators build dynamic and engaging learning experiences that respond to a variety of learning styles and ability levels. Ben and others highlight that "improvements in student performance are observed only for high levels of digital skills. Digital skills influence the intensity of ICT use, with intensive use for educational purposes

stimulating involvement in studies and resulting in improved skills and performance. Low-level use of ICT does not result in the exploration of sophisticated functionalities related to applications, while more intensive use allows the development of strategic skills required to achieve specific objectives. The impact of ICT on academic performance has become a subject of numerous debates involving economists and education scientists, emphasizing the role of ICT-related equipment and its use in explaining differences in student performance” (Ben et al., 2022; Adel et al., 2008). The quality of ICT integration in educational environments influences students' learning outcomes and academic achievement. For students, it enhances learning outcomes by providing access to a wealth of resources and facilitating interactive and personalized learning experiences.

In today's digital world, educators must understand the necessity of properly using ICT to improve student engagement and performance. For educators, it enables the adoption of innovative teaching methodologies and the effective use of digital tools to enhance instruction. Theoretical frameworks such as the Technological Pedagogical Content Knowledge (TPACK) model emphasize the integration of technology, pedagogy, and content knowledge to achieve effective teaching and learning (Matthew et al., 2014). “The specific strategies recommended in the TPACK model include using teacher educators as role models, reflecting on teaching practices, and providing ongoing feedback and evaluation to preservice teachers (Sedef et al., 2019). Additionally, the TPACK model supports active learning strategies such as problem-based learning (PBL), reflective questioning and answering (RQA), and a combination of PBL and RQA (PBL-RQA) to enhance student creativity in genetics courses” (Siti et al., 2022; Rodríguez et al., 2019). The TPACK model also encourages educators to continually adapt and update their teaching methods to meet the evolving needs of students in a technology-driven world. By incorporating these strategies, teachers can create engaging and interactive learning experiences that foster critical thinking and innovation among students.

Current Trends in ICT Integration in Language Teaching and Translation Studies

The use of digital tools and platforms in language education and translation studies is becoming more common, creating potential for interactive and immersive learning experiences. Educators are applying these tools to improve students' language acquisition, cultural understanding, and translation abilities. Language learning applications (e.g., Duolingo, Babbel, Canva), online dictionaries, and translation software (e.g., Google Translate, DeepL) are now widely used in language instruction. These technologies offer dynamic and individualized learning experiences, allowing students to practice listening, speaking, reading, and writing abilities in real-time.

In translation studies, computer-assisted translation (CAT) technologies and machine translation systems have become indispensable for increasing efficiency and accuracy. These tools can help bridge language barriers and facilitate communication between individuals from different linguistic backgrounds. To ensure accurate and detailed readings, language learners and translators must develop critical thinking abilities as well as cultural knowledge. Individuals who understand the nuances of other languages and cultures can avoid misinterpretations and successfully deliver thoughts and ideas in a way that resonates with the intended audience. By developing these skills, language professionals can provide high-quality translations that maintain the original meaning and tone of the source text. Mastering these abilities while also employing technology can lead to more effective communication in an interconnected world.

ICT plays a crucial role in bridging the gap between translation studies and language education. Digital tools such as CAT software, online dictionaries, and parallel corpora provide students with practical resources for both language learning and translation practice. For example, students can use translation memory tools to compare their translations with professional ones, thereby improving their language skills and translation accuracy. Moreover, incorporating technology in language education can enhance students' understanding of cultural nuances and idiomatic expressions, ultimately improving their translation quality. By utilizing digital resources, students can also collaborate with peers and receive real-time feedback, fostering a more interactive and engaging learning experience. Translation studies contribute to the development of multilingual competence, a key goal of language education. By engaging in translation

tasks, students gain a deeper understanding of how languages function and interact. This not only improves their proficiency in the target language but also enhances their ability to navigate between languages and cultures. Translation studies also help students develop critical thinking skills as they analyze and interpret different linguistic nuances. This comprehensive approach to language learning promotes a more thorough understanding of global communication and intercultural exchange.

Uzbekistan's ICT Integration for Higher Education

Uzbekistan has made considerable efforts toward integrating ICT into higher education. The "Digital Uzbekistan 2030" policy and the establishment of the Ministry of Innovative Development demonstrate the government's commitment to digital transformation. Universities have been encouraged to include e-learning platforms and digital tools in their courses. This shift towards technology-enhanced learning has the potential to improve access to education and enhance the quality of teaching and learning. By embracing ICT integration, Uzbekistan is positioning itself to better prepare students for success in a globalized, digital economy.

The integration of information technologies into Uzbekistan's education system has the potential to improve student performance by creating a rich environment for teaching and learning, creating new opportunities for students and teachers, and encouraging better teaching practices. However, challenges exist in adapting to student-centered learning methods and independent learning styles, especially for students accustomed to teacher-centered approaches in Uzbekistan (Bazar & Shavkat, 2021; EngKee, et al., 2015). Educators must receive proper training and support to effectively implement these new teaching methods and technologies. Additionally, investing in infrastructure and resources will be necessary to ensure that all students have equal access to these opportunities. Despite these attempts, difficulties still exist. Limited high-speed internet connection in remote regions, a lack of ICT infrastructure, and insufficient educator training all contribute to the ineffective integration of ICT in language and translation instruction.

There is also a demand for specialized digital materials that reflect Uzbekistan's language and cultural environment. To address these challenges, the government of Uzbekistan should prioritize investments in expanding internet infrastructure and providing comprehensive training for educators on integrating ICT into language and translation instruction. Additionally, collaboration with local content creators to develop digital materials that are culturally relevant and linguistically appropriate can further support effective ICT integration in education.

Several universities in Uzbekistan, including Uzbek State World Languages University, Tashkent State University of Uzbek Language and Literature, and Samarkand State Institute of Foreign Languages, have effectively adopted ICT-based language programs. These universities have seen increased student engagement and improved learning outcomes as a result of their efforts to incorporate technology into language instruction. By continuing to invest in these initiatives and fostering partnerships with industry leaders, Uzbekistan can further enhance the quality of language education across the country. These institutions have introduced online courses, digital libraries, and virtual language labs to enhance the learning experience.

Prospects for Enhancing ICT Proficiency in the Future

Future directions for advancing ICT competence in higher education include integrating emerging technologies like artificial intelligence and virtual reality to enhance pedagogical approaches. Additionally, ongoing professional development for educators to improve their ICT competencies is crucial, along with policies ensuring equitable access to ICT infrastructure. Context-specific ICT training modules focusing on technical skills and pedagogical strategies are recommended for effective integration into teacher training programs. Challenges such as inadequate infrastructure, insufficient training, and resistance to change among educators need to be addressed to facilitate the effective integration of ICT (Majid, 2025; Nasreen, 2024). Moreover, collaboration between educational institutions and industry partners can help ensure that teachers are equipped with the latest technology skills needed in the workforce. By fostering a culture of innovation and continuous learning, educators can stay up-to-date with advancements in ICT and

effectively incorporate them into their teaching practices. Having carefully examined the recommendations provided by scholarly publications, we have determined that to enhance the integration of ICT in higher education, we must concentrate on and address the following challenges:

1. *Strengthening ICT Infrastructure* – To fulfil all of the potential of ICT, Uzbekistan has to invest in high-speed internet and digital infrastructure, particularly in rural regions. Public-private collaborations can help bridge the digital gap.

2. *Professional Development for Educators* – Training programs should be implemented to equip educators with the skills needed to effectively use digital tools and platforms. International collaborations can facilitate knowledge exchange and capacity building.

3. *Developing Localized Digital Resources* – There is a need for digital resources that reflect the linguistic and cultural context of Uzbekistan. This includes the development of Uzbek-language learning apps, online dictionaries, and translation tools.

4. *Promoting Research and Innovation* – Universities should encourage research on the use of ICT in language and translation education. Funding should be allocated for innovative projects that explore the potential of ICT, and other emerging technologies.

This will ultimately lead to advancements in language learning and translation services. By fostering a culture of innovation and research in universities, Uzbekistan can position itself as a leader in digital language resources. Collaboration between academia, industry, and government will be crucial in driving these advancements forward.

In conclusion, the integration of Information and Communication Technology (ICT) into language learning and translation studies is essential for preparing students for the demands of the digital age. Uzbekistan has made significant progress in adopting ICT in its higher education system, particularly in language and translation studies. However, challenges such as limited access to digital infrastructure, a lack of specialized training for educators, and the need for localized digital resources remain obstacles to full implementation. To overcome these challenges, Uzbekistan can learn from international experiences by investing in robust ICT infrastructure, prioritizing professional development for educators, and fostering research and innovation in digital tools and methodologies.

Higher education institutions should revise their curricula to include courses that focus on the practical application of ICT in translation, such as the use of computer-assisted translation (CAT) tools, machine translation (MT) systems, and post-editing techniques. Additionally, collaboration with global translation technology organizations and industry leaders can provide students with hands-on experience through workshops, internships, and practical training programs. These initiatives will not only enhance students' technical skills but also equip them with critical thinking and problem-solving abilities required in the modern translation industry. By embracing these strategies, Uzbekistan can strengthen ICT competence in higher education, ensuring that graduates are well-prepared for the complexities of a globalized and digitalized world. This forward-looking approach will not only benefit students but also contribute to the country's broader goals of digital transformation and economic development.

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