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FORMATION OF DIGITAL COMPETENCE IN PROFESSIONAL TRAINING OF LINGUISTIC STUDENTS

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Abstract. The article examines ways to upgrade the instructional content aimed at educating prospective translators in the conditions of digitalization in the field of linguistics, with the formation of digital competence of translators. This paper aims at presenting students' perceptions regarding teachers' use of technologies and methods to facilitate the development of their digital competence, when performing profession-related tasks.

Realizing the advantages of the educational process in professional digitalization, the Department of digitalization of professional education launched the course aimed at the development of digital competence through digital materials for teaching translation students at the University at the level of baccalaureate. The course organized on the platform Moodle can be used as an online course providing possibilities of teacher-guided lessons and self-study. A survey is conducted to better understand the starting situation of digital lessons. This paper focuses on the study of technologies in forming professional digital competence of linguistic students. The paper also gives the analysis of the definitions of the terms *digitalization* and *digital competence*, describes the objectives and content of the digital materials, their structure in the course, and the main digital professional skills they develop.

The practical value of this research lies in determining the essential technological resources that facilitate the development of digital competence throughout specialized linguistic education. It also involves adapting and integrating appropriate ICT tools into the curriculum to effectively support and promote the systematic formation of key professional skills among students majoring in linguistics and translation.

Keywords: digital competence, digitalization, technology, professional training, machine translation, linguistic student, translator, CAT systems, ICT tools

Introduction

The swift integration of digital technologies into almost all professional domains has become essential for the effective development of modern society.

A wide range of occupations now demands that specialists possess a solid level of digital proficiency. The expansion of the contemporary translation industry is largely driven by the adoption of advanced tools and technological solutions built on information and computer systems. The introduction of specialized software platforms has significantly improved the productivity and overall performance of translators and linguists (language professionals).

Within an information-driven society, professional training is directed toward establishing and advancing essential competencies that equip specialists to navigate the evolving conditions of the modern environment. Such outcomes can be achieved only through properly organized educational processes. Consequently, translator training programs should prioritize the development of digital skills by integrating contemporary technological resources into translation practices.

The challenge lies in determining how to effectively teach translation students technological tools to form their digital competence. Thus, the article aims at determining the importance of the application of modern digital technologies for the formation of the digital competence of linguistic students by means of studying a specialized subject. The goal of the course is to train university linguists (baccalaureate) in digitalization of their professional activity. The article considers the main goal of the course to form digital competence of students.

The objectives of the article are: 1) to survey and analyze the attitudes of linguistic students and their willingness to study the course *Digitalization of the professional activity* in order to acquire digital competence; 2) to consider the selection of modern technological tools, in particular CAT systems, for the translation profession. The purpose of the survey also was to determine prior knowledge and skills of students before starting the course in order to optimize the curriculum.

Digital competence refers to the core competencies that are to be established within the framework of professional education for future experts. Hence, there is a need to determine the components of digital competence and effective ways to diagnose its formation.

One of such ways is surveying. The main task of survey is to ensure the informativeness of translation students, to learn their preferences and needs, to adapt the curricula for their studies in the learning system. Data were collected using a questionnaire among students of the translation faculty.

Graduates will become either translators/interpreters or go to the publishing industry as experts and editors in linguistics, equipped with modern technological instruments to conduct their jobs effectively.

A large number of studies highlights the importance of forming technological and digital competences of students. In recent scholarly works,

the notion of *competence* is used more frequently than the term *skills*. Within the OECD project, this concept is described in the following way: “A competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context” [1, p.4]. Another fundamental explanation describes the competence as “the acquisition of knowledge skills and abilities at a level of expertise sufficient to be able to perform in an appropriate work setting” [2].

In recent years, the idea of digital competence has gained prominence as an essential set of skills and knowledge required in a knowledge-based society. Within the European Union, digital competence is recognized as one of the eight fundamental competences necessary for lifelong learning in such a society. They involve using computers to access, evaluate, store, create, present, and share information, as well as to communicate and engage in collaborative online networks [3]. Article 4 further clarifies that digital competence encompasses essential computer applications, including word processing, spreadsheets, databases, and information management, alongside an awareness of the benefits and potential risks associated with the Internet and electronic communication [3].

According to the literature, there is a broad consensus among researchers on the importance of adopting new approaches to learning in order to address global challenges [4, p.40]. Reviews of existing studies highlight a defined set of skills, competencies, and qualities needed in the 21st century. This includes ICT and digital literacy, which encompasses using technology as a means for learning, communication, and collaborative activities [4, p.5].

The issue of digital competence is specifically described by Liisa Ilomäki et.al. in the article *What is digital competence?* The authors have built a diagramme of the digital competence that covers background disciplines and its related concepts [5, p.5].

Digital competence is considered a fundamental skill in the field of translation. To enhance the digital abilities of students-translators, it is necessary to integrate modern technologies into the curriculum. Digital competence is a priority in different translation agencies, where they understand it as essential for conducting professional functions.

However, the swift digital transformation in education has posed various challenges for teachers. As M. Lucas points out, beyond managing different hardware and software, educators are required to decide how, why, and for what purposes these technologies should be applied pedagogically [6, p.3].

For a linguist, digital competence involves strong technical skills combined with extensive knowledge, enabling them to effectively perform their professional responsibilities. A translator is considered technically skilled when they are well-versed in contemporary technologies and maintain up-to-date technical

knowledge. The technological competence is firmly grounded in both pedagogical theory and practice, making it essential for preparing future specialists for effective teaching in higher education [7]. During training and practice students will acquire digital skills such as working with word processors, CAT tools, spreadsheets, and databases, creating electronic presentations, navigating the web, designing websites, using digital cameras, managing computer networks, installing software, conducting videoconferences, handling various computer storage devices and more [8].

Translators work with texts. They handle textual materials, and text digitization refers to the conversion of printed or handwritten texts into electronic formats that can be read and processed by a computer. A text must be available in digital form, as a computer-readable file [9].

Literature research on digitalization and computing has expanded extensively, with many studies exploring issues related to digital technologies. According to Yates and Rice, digital technologies consist of four main components [10, pp.37-38] – digitization, which involves encoding information into binary form, computing, which enables the processing of this information through software programs, etc. Any digitally represented information can therefore be processed, combined, manipulated and analyzed for diverse purposes.

The idea of launching technology in education of linguists, including translators, has been specified in the publications by Alla Berestova [11], Lynne Bowker [12], Emma Goldsmith [13], Rostyslav Tarasenko et.al. [14; 15].

The author Lynne Bowker in her unique book *Computer-Aided Translation Technology: A Practical Introduction* introduces the system of technology to the field of translation. She reveals the role and use of technology in translation. This book provides a practical introduction to a wide range of computer-aided translation tools (CAT) that translators need to understand and use in order to stay competitive in today's translation environment [12].

In the professional activity, translators use different technological tools in the translation process. According to Lynne Bowker, technical tools may be categorized in three groups, from HT through to MT: a) HT (human translation) – word processors, spelling and grammar checkers, Internet; b) CAT (computer-aided translation) – data-capture tools, translation memories, corpus-analysis tools, terminology-management systems, diagnostic tools); c) MT – machine translation systems [12, p.7]. As the author rightly notes, these tools must be included in the translator-training curriculum.

One of the contemporary researchers R.O. Tarasenko examines the professional training of contemporary translators in several articles [14; 15]. His research focuses on ways to enhance the training programs for future translators. He analyzes the curricula of translator education programs at universities across Europe, America, and Asia. Tarasenko concludes that both academic programs

and translation agencies tend to emphasize the use of multiple CAT systems [15].

Numerous scholars and professionals evaluate and compare CAT systems to identify the most efficient ones. For example, Emma Goldsmith highlights SDL Trados Studio 2021 as a recommended tool in her blog [13]. Currently, some of the leading CAT systems are cloud-based professional translation technologies. Notable examples include Wordfast Anywhere and XTM Cloud, which are considered the next-generation translation technologies [15].

To encourage the development of digital competences and professional skills for translation students, the subject has been introduced *Digitalization of professional activity* in Ablai Khan Kazakh University of International Relations and World Languages at the Faculty of Translation and Philology. It was introduced to support the redesign of teaching so that students master digital competences and are prepared to integrate technology in their future jobs.

Considering the importance of developing digital competence among linguistic students in today's learning, we set the task of creating a syllabus and an electronic Moodle-based course that supports both major training pathways – translator and text researcher (linguist).

Material and methods

The study applies sociological and statistical approaches, along with systems analysis, to examine the role of information and communication technologies (ICT) in the education of linguistics students and their impact on competencies and learning outcomes. Surveys and information analysis, combined with statistical techniques (ranking methods and descriptive statistics), helped identify ICT tools most relevant for teaching a specialized discipline based on student needs.

The experiment was conducted at the Department of Digitalization of Professional Education of the Kazakh Ablai Khan University of International Relations and World Languages (Almaty, Kazakhstan) within the practical course '*Digitalization of Professional Activity*'. Data were collected through a Google-Forms questionnaire.

Responses from 80 fourth-year *Translation studies* students allowed us to determine key factors influencing the development of digital competence in translators. These factors include:

- theoretical grounding in digitalization;
- selection of up-to-date (preferably free and Kazakh-compatible) machine translation systems;
- mastering at least three or four MT systems;
- confident use of available CAT tools;
- plentiful practice in solving real professional tasks using digital technology.

Three educational components were identified for teaching future translators' new digital skills: selecting appropriate technological tools, choosing effective teaching methods, and structuring a course on the Moodle platform.

A Moodle-course was developed and filled with instructional materials. It consists of two modules: a) digital tools for translation practice; b) digital tools for linguistic research. The selected programs and applications were chosen to support competence formation in both domains.

To align the course with student needs, a survey was conducted to assess their background knowledge, expectations and preferences regarding CAT systems and other digital tools.

Participants. 80 fourth-year students, studying Translation as a major in the specialty 5B02301 *Translation study*, participated in the survey. They had previously completed an introductory ICT course in their first year and were beginning a more specialized course '*Digitalization of professional activity*' (for translators).

The survey aimed at: 1) to evaluate students' initial digital competence to optimize the curriculum; 2) to gather their views on further developing this competence.

Students answered 34 questions divided into three groups: a) theoretical knowledge of digitalization (multiple-choice); b) selection of digital tools for study (multiple-choice and open responses); c) opinions and attitudes toward course components (open responses).

Thus, responses were organized into three clusters: *digital tools*, *opinions and attitudes*, and *theory*. Quantitative data (multiple-choice responses) were analyzed statistically, while qualitative data (open answers) were described and interpreted. This mixed-methods approach helped capture both measurable trends and detailed insights into students' experiences, expectations, and perceptions of using digital tools and machine translation systems.

Results

Our research aims to determine the importance in the application of modern digital technologies for the formation of digital competence of linguistic students (translators) by means of studying a specialized subject. The objectives of the article are: 1) to survey and analyze the attitude of linguistic students and their needs and willingness to study the course *Digitalization of professional activity* in order to acquire digital competence; 2) to consider the selection of modern technological tools, in particular CAT systems, for the translation profession.

For this purpose, a survey was conducted, students' background and expectations were analyzed, the choice of CAT systems and other digital tools for the curriculum translation students was determined. The questionnaire was anonymously conducted among the 4th-year 80 full-time bachelor-students of

the Faculty of Translation and Philology, in Ablai Khan Kazakh University for International Relations & World Languages (Almaty, Kazakhstan) on the topic *Digitalization of the professional activity of linguistic students* via using Google forms. Two groups of questions relevant to this research have been outlined in this study: a) Attitudes and opinions to the course; b) Selection of technological tools and applications to be studied in the course to develop digital competence of future translators. Respondents were asked to answer two types of questions (totally 34 questions) to identify the importance of the application of information-communication technologies and technological tools in linguistics to develop their digital competence.

The results of the conducted questionnaire are described in the following analysis below. We generally conclude that majority of future linguists and translators do not sufficiently possess/acquire digital competence and lack in using CAT systems. Consequently, they cannot manage digital technologies in their future professional activity to the full extent.

1. Interest in and Attitudes Toward Studying Digitalization

The initial question explored whether students feel the need to study the subject ‘Digitalization of the professional activity of linguistic students.’ A strong majority (60%) responded affirmatively positive, indicating significant interest and recognition of its relevance. Approximately 20% were unsure, while fewer than 5% did not find it necessary. This indicates a general acknowledgment of the importance of mastering digital tools in the field of linguistics and translation. These responses underscore the perceived value of acquiring digital competencies as integral to the future of linguistic professions (Figure 1).

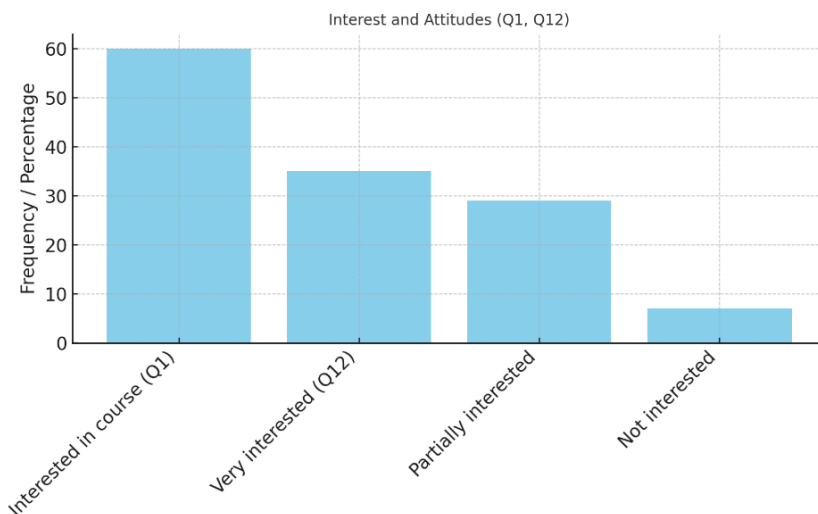


Figure 1 – Interest and Attitudes (Q1, Q12)

2. *Students' Interpretation of Digitalization Concepts and 'Text Digitalization'*

Understanding of digitalization was assessed through questions addressing definitions and interpretations. The questionnaire results demonstrate varying levels of understanding regarding the concept of digitalization. Half of the respondents correctly identified text digitalization as the process of converting physical records into digital form. However, a significant portion still associate it narrowly with access to digital content (37%) or and, to a lesser extent, textual interpretation and translation, pointing to partial conceptual gaps. When asked about the digitalization of a linguist's professional activity, most students linked it to technological evolution in the profession (50%) and integration of CAT tools and online resources for translation tasks (40–45%). These variations suggest partial conceptual clarity, emphasizing the need for more precise instruction on digitalization terminology and processes.

3. *Usage and Awareness of Machine Translation Tools*

Machine translation (MT) tools are widely used among students, primarily for their speed (60%) and lexical variety (45%). Multilingual capabilities, particularly Kazakh language support, were also the most valued. This trend illustrates the practical reliance on MT tools such as Google Translate, DeepL, and Yandex Translate were the most frequently cited tools, indicating reliance on accessible, general-purpose platforms. This underscores the practical role of MT tools in academic and personal translation tasks. However, the findings also point to a need for critical awareness and proper training in the use of these tools to ensure translation quality (Figure 2).

When asked about tools used at home for professional translation, most students cited free and easily accessible tools such as Google Translate, DeepL, and Yandex Translate. While a few mentioned more specialized tools like Smartcat and ABBYY Lingvo, the preference for general-purpose engines over professional CAT tools was evident. This preference for accessible online tools over professional-grade software such as SDL Trados or MemoQ suggests cost and ease-of-use as key factors. A few students mentioned not using any tools, indicating a lack of access or awareness. This reflects both economic factors and a lack of familiarity with more advanced platforms, further emphasizing the importance of curriculum integration of CAT systems (Figure 2).

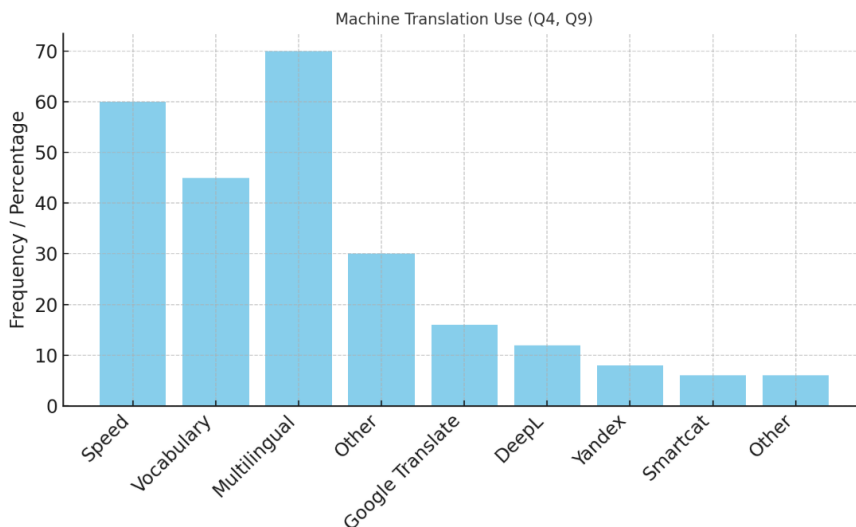


Figure 2 –Reasons for Usage of MT Tools (Q4, Q9)

4. Familiarity with and Awareness of CAT Tools among respondents

Students demonstrated varying degrees of familiarity with CAT (Computer-Assisted Translation) tools. Smartcat (60%) and DeepL Translator (40%) were the most recognized, followed by SDL Trados Studio and PROMT (25% each). However, when it comes to actual usage, DeepL leads, followed by Smartcat and PROMT. And such advanced tools like SYSTRAN and MateCat had low recognition levels. Alarmingly, over 25% of students reported using none of the listed tools, and a similar number stated they had never used a CAT tool at all. This disparity between awareness and practical engagement points to a critical gap in hands-on training. This reflects limited exposure to industry-grade technologies and supports the need for curriculum-based familiarization.

Despite general familiarity, actual usage of CAT tools is limited. DeepL and Smartcat were used by 35% and 25% respectively, while over a quarter reported using none. Many cited lack of knowledge or access as barriers. This gap between awareness and application points to the need for hands-on training in educational settings. Moreover, students expressed clear expectations of what CAT tools should offer: translation memory, quality analysis, and editing features were ranked as essential, confirming that learners view these technologies as more than just translation engines but as integral parts of the entire workflow.

When asked about expected features of CAT tools, students emphasized translation memory (50%), quality control tools, editing features, and performance analysis (35%). Fewer prioritized text segmentation and spelling checks, although these were still acknowledged. This reflects an understanding of CAT tools as comprehensive platforms that go beyond basic translation (Figure 3).

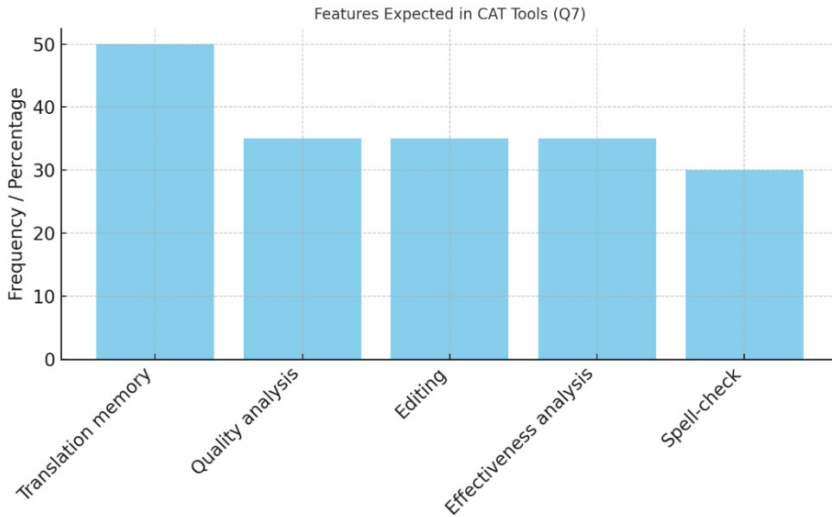


Figure 3 – Familiarity and Usage of CAT Tools (Q5, Q6, Q7)

5. Accessibility and Installation of CAT Tools

Responses to the question about whether students have installed CAT tools on their personal computers reveal a significant digital accessibility gap. Financial barriers and lack of knowledge were the most cited reasons. Nearly half of the respondents reported not having any CAT software installed. Only a few reported having a licensed versions of CAT program. Common reasons included high costs and lack of technical knowledge. These findings underscore the importance of providing institutional access to professional tools and training, also the infrastructural limitations students face in accessing professional-grade software outside the university environment. These challenges suggest a need for institutional support, including free access to licenses and structured training modules (Figure 4).

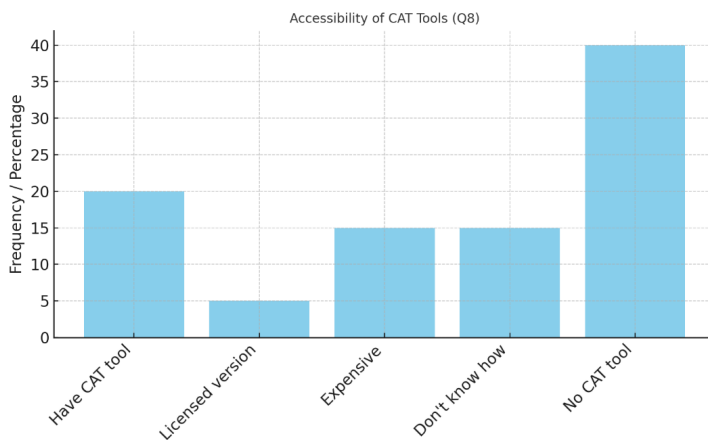


Figure 4 – Accessibility of CAT Tools (Q8)

6. Components of Digital Competence

Students demonstrated a well-rounded understanding of digital competence. Most commonly selected areas were digital content creation (56%) and information/data literacy (48%). Students also recognized the importance of problem-solving and communication in digital environments also ranked highly. However, cybersecurity awareness was notably lower (30%), suggesting the need to integrate digital safety more deeply into curricula. However, digital safety was less emphasized, suggesting a potential blind spot in cybersecurity and personal data protection—a critical area for professional practice that should be reinforced in training programs (Figure 5).

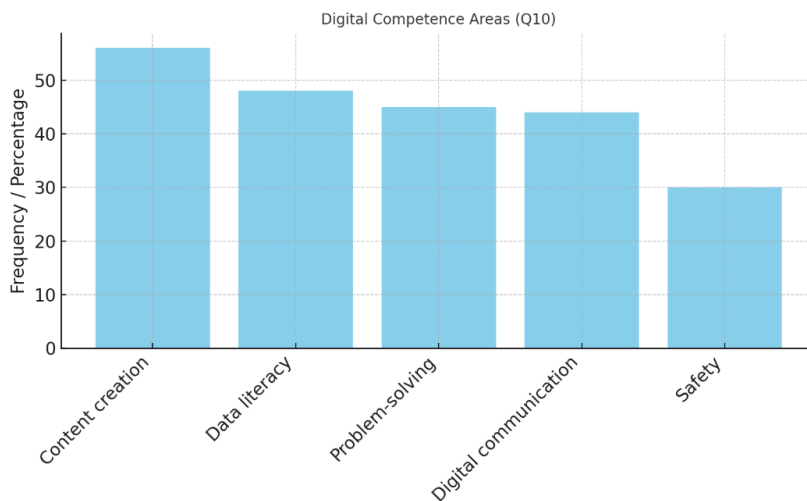


Figure 5 – Digital Competence Key Areas (Q10)

7. Learning Expectations and Expected Competences from the Digitalization Course

Students expect the course to help them develop practical digital and technical competences, including content creation skills and editing, as well as improved English skills. Digital literacy was a dominant theme (55%), followed by English language development (35%). Surprisingly, fewer students mentioned keyboard skills or broader competencies (soft skills) like creativity, social intelligence and ICT expertise, were rarely mentioned, indicating a focus on tangible technological outcomes of the course (Figure 6). This primarily indicates a utilitarian expectation from the course, which, while understandable, suggests the need to expose students to a wider range of future-oriented digital skills.

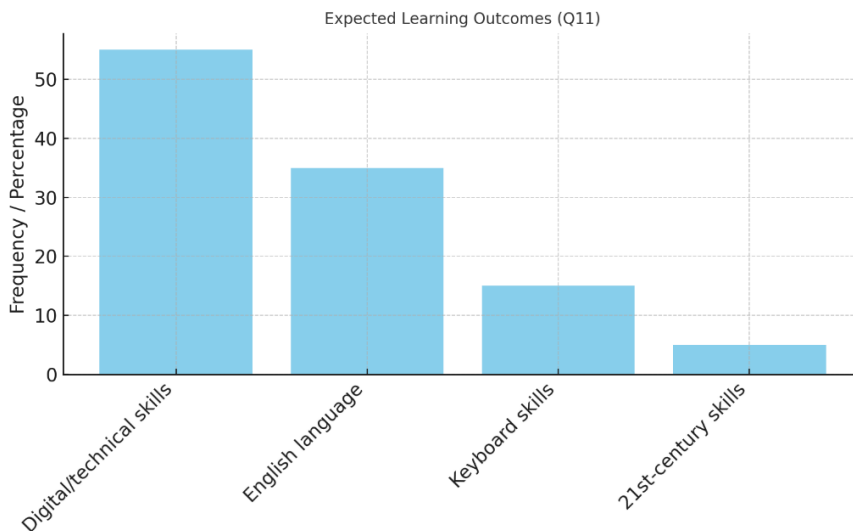


Figure 6 – Expected Learning Outcomes (Q11)

8. *Desired Tools and Technologies to Study*

Concerning interest in specific digital tools, their interest in the course remains high, with 35% of students showing strong enthusiasm due to its career relevance. Other responses highlighted curiosity about unfamiliar tools or a desire to improve existing tech knowledge. A small group reported disinterest, citing pre-existing knowledge or lack of necessity.

Open-ended responses indicate strong interest in learning about CAT tools, their types, and specific programs like MemoQ, Smartcat, and SDL Trados. Students predominantly requested instruction in CAT tools, with frequent mentions of MemoQ, SDL, and Smartcat. A minority expressed interest in programming languages such as Python and Java, indicating growing an emerging awareness of interdisciplinary digital skills. However, a number of respondents expressed uncertainty, suggesting a need for clear initial guidance and foundational orientation in digital toolsets (Figure 7).

9. *Views on ICT and its role in Future Careers*

Students generally acknowledged the value of ICT and largely recognize the role of ICT in enhancing the efficiency, speed, increasing productivity and quality of translation work tasks. CAT tools were again central in their responses. Many expect to integrate CAT tools into their future careers. However, some students lacked clarity on how ICT would shape their careers, indicating a need for clearer career-path alignment within the curriculum. A notable group expressed uncertainty, highlighting a need for practical orientation. A small group of few responses offered advanced reflections touching on the ethical issues and global implications of digitalization, societal aspects of digital transformation, such

as the role of ICT in preserving endangered languages, also including concerns about linguistic diversity and digital equity (Figure 7).

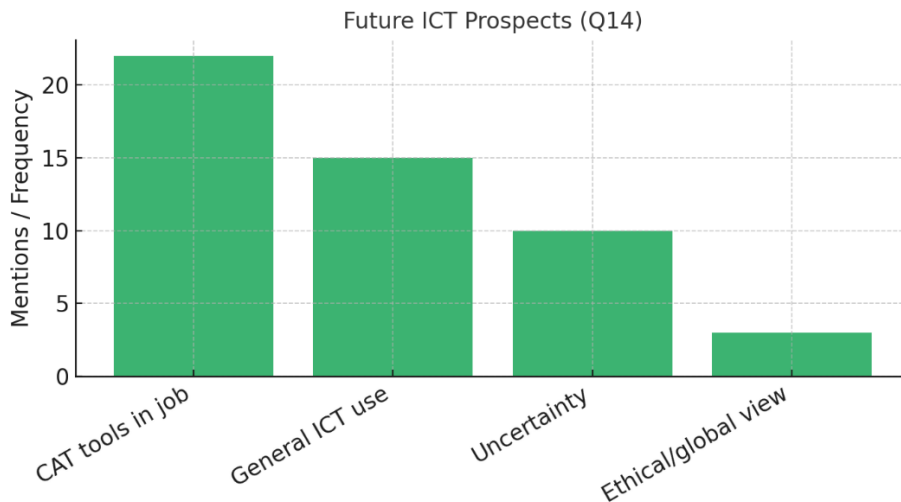


Figure 7 – Future ICT Prospects (Q14)

The questionnaire results reflect a generation of future linguists who are aware of the necessity of digital competence but are not yet fully equipped with the practical tools or training to apply it effectively. The interest in CAT tools and digital technologies is strong, but accessibility issues and knowledge gaps remain prominent. For linguistic education to meet the evolving demands of the translation industry, a structured, accessible, and practice-oriented approach to teaching digital tools is essential. These findings offer a compelling rationale for integrating digitalization-focused modules within translator training curricula and aligning them with real-world professional requirements.

Discussion

After analyzing the survey findings, it becomes clear that the majority of translation students are interested in taking the course ‘Digitalization of Professional Activity’.

Following their needs and expectations, we can build an adaptive curriculum for the translation students in the specialized discipline ‘Digitalization of professional activity’. The results of the survey allow teacher organize the course in a more appropriate and useful for the students’ way. The course should integrate a wide range of technological tools, helping students develop their digital competence throughout the learning process.

Structuring the course. The translator training curriculum must have an overview of the most important technological tools involved in training of future translators to digitalize their professional activities. Students of the specialty

Translation study at the Kazakh Ablai Khan university of international relations and world languages (Almaty, Kazakhstan) study in the 4th year a specialized compulsory subject ‘Digitalization of professional activity’.

It is the response to the modern world where foreign-language specialist must be equipped with computer technologies to be able to successfully conduct their jobs in the modern environment. The course is aimed at translators, linguists, humanities scholars who, starting from a linguistic perspective, take steps into the world of digitization of texts and want to get to know the technologies behind it.

Since they are prepared in two directions - as translators and foreign-language linguists (researchers) - they must acquire knowledge and skills in these two directions.

The course is divided into two thematic modules, where relevant technologies are studied during 15 weeks, including two weeks for midterms. Students do not need any specialist programming knowledge for this course, they are not programmers. It is for students who are interested in perfection of the quality of their translation, in digitization and annotation of texts, in learning useful digital applications.

The course in Digitalization describes digital paths that are becoming increasingly important in the linguistics. It consists of two modules:

1) The first module is aimed at forming general digital competence in organizing and conducting translation business, in text digitization, in text research, and text editing. Here the tools are studied which are necessary for preparation of documents in the digital form (digitization), digital means of collecting information, its storing and presentation to the public, for error correction and stylistic perfection, text edition, for linguistic analytics, big data arrangement. Students will know what exactly the digitization of texts entails, how to make texts in a corpus optimally searchable, how texts can be enriched with linguistic information. What technology to have in the office in the workstation.

2) The second module deals with formation of special digital competence needed in the translation process, including proper translation and post-editing of machine translation. They are machine translators and other CAT-tools. The expected digital skills will be natural language processing, parsing, etc.

Content of the course. According to the survey, there exists an urgent request on studies of CAT-technologies. Special attention in organizing the course must be focused on the selection of CAT tools to study. These tools should involve automated translation systems as well as terminology management platforms. Integrating cloud-based CAT systems into the training of future translators education has become a necessary step, considering the current development trends in the translation sector. The use of professional software solutions including various specialized programs and digital applications, CAT-tools and cloud technologies contributes to developing students’ digital literacy. At the

same time, it enhances their ability to apply modern technologies and to handle up-to-date technological means for arranging and managing their workspace environment more effectively.

In the survey, most students express their wish to study digital tools and technology in the course '*Digitalization of the professional activity of linguists*'. Among them they name CAT-tools, Smartcat, DeepL, more specifically SDL, Python language, MemoQ.

Among CAT machine translators they already know and use Smarcat and DeepL translators, but not very confidently and professionally. Many students still don't have any CAT translation programme on their personal computers, which might be a challenge for them as future translators. So, they must download, learn, get used to applying machine translators during the lessons in the course.

As for online translators (Google, Yandex, etc.) students know how to use them for completing short urgent tasks in translation. But because they understand the lack of these technologies, they feel the need in more serious studies of proper machine translators which can give the opportunity to translate long texts, do post-editing within the program, work as a team.

Taking into account both the survey results supported by practical personal experience in designing educational content on modern CAT tools for translator training, it becomes reasonable to propose the following recommendations:

- The curriculum should be supplemented with leading CAT systems used in the contemporary translation industry that demonstrate the highest level of technological efficiency and widespread professional use. These may involve SDL Trados, MemoQ, SmartCat (as it is a freely available option), DeepL, and other tools, ensuring the presence of both desktop- and cloud-based solutions.

- According to the responses, survey participants expressed the need to include at least three leading CAT systems in the training program, preferably those supporting the Kazakh language and offering free or trial access. This preference aligns with current industry trends, as translation agencies tend to broaden the range of automated translation tools used in service delivery to enhance client satisfaction.

The most recent versions of leading CAT systems should possess and ensure such features: a) provision of core tools for the entire translation process, from project initialization and setting its parameters configuration to terminology databases management and translation memory bases integration, translation itself execution, and quality control verification; b) user-friendly adaptations for educational purposes suitable for teaching&learning, with either free access or time-limited trial availability for students on a permanent or temporary basis; c) the possibility to operate the systems without software local installation on their own computers, allowing students to work with systems from any device with an Internet connectivity; d) availability of the Kazakh language.

Methods of teaching in the course. The leading pedagogical feature is definitely practical work, solving work-related tasks with the help of technology. But as the survey shows, students also need theoretical backgrounding knowledge in the field of digitalization.

Each theme contains one-three educational videos, a short Quiz on theory, a number of practical tasks in autonomous and guided self-studies. In each week they will need to download a special program or application to learn to use it in practice in the lesson and for later professional use. Competence-based approach to learning presents new challenges for both educators and students alike. Now, instead of merely acquiring theoretical knowledge, students are expected to gain practical experience and foster their skills through engagement in professional assignments while doing work-related tasks. Theoretical knowledge will support this practice and deepen their digital skills.

Teaching methods may include:

- regularly surveying students regarding the development of digital competence and collection of student feedback on their progress in acquiring digital skills and conducting periodic assessments to evaluate students' technological proficiency;
- preparing instructional guidelines on the professional application of digital technologies and collaborating manuals, recommendations, reference materials for the effective use of digital tools in professional practice contexts;
- creating educational videos as guidelines for students how to download programs, how to use the tools;
- holding seminars for students devoted to discussion of theoretical or informational issues;
- designing educational tasks that necessitate the use of information-communication technologies and incorporating assignments into the curriculum that require the active usage of ICT skills;
- establishing a monitoring mechanism to guide students' autonomous learning activities through distance education technologies on the platform Moodle;
- implementing of practical exercises in translation and engaging students in hands-on translation tasks, organizing terminological databases, and aligning parallel texts using the specialized software, primarily CAT-tools systems.

Standard technological procedures performed during translation projects may include and consist of the following:

- preparing source materials and processing source texts for translation, including scanning, text recognition, OCR and converting between files formats, etc.;
- creating and populating glossaries and terminology databases to maintain consistency in terminology usage and ensure translation quality;

- building and refining translation memory databases;
- performing translations while integrating terminology and translation memory databases, with support for collaborative work including features that enable teamwork;
- conducting quality assessment of translations;
- post-editing of machine translation results and outputs, produced by MT systems.

In addition, other types of specialized software can be suggested and recommended to be included into the training curriculum for translators, particularly:

- optical character recognition (OCR) systems for text digitization;
- terminology management systems (TMS) platforms and tools;
- text aligner systems and alignment tools for parallel texts;
- quality assurance (QA) systems, platforms and software;
- word processors, word-processing programs and applications.

It is important to note that some of these software products and that of certain application programs can provide for several technological operations.

Conclusion

According to the results of the research, we can conclude that the level of formation of digital competence of students in the sphere of translation will be higher if they study the curriculum adapted to their needs, expectations, and existing experience.

The practical significance of the study was to identify a set of necessary technological tools to ensure the development of digital competence during the specialized studies, and to adjust the selected means of ICT in the course with the purpose of formation of professional competences for students-linguists (translators).

It is clear that the concept of forming digital competence of linguistic students might be considered further. More research can be aimed at developing educational methods and techniques, at mastering new emerging tools for the better acquisition of digital competences and technological skills based on modern software and hardware in the process of professional training of students.

Furthermore, the conceptual basis of cultivating digital competence in future linguists deserves deeper theoretical and empirical investigation. Subsequent research should focus on designing and validating innovative teaching pedagogical strategies, methodologies, modern educational models, and practical methods for mastering newly emerging digital technologies. Such research should emphasize the use of up-to-date software and hardware to enhance linguistic students' technological proficiency and professional readiness in the evolving digital academic and professional environment.

REFERENCES

[1] OECD (=Organisation for European Co-operation and Development). The definition and selection of key competencies. Executive Summary. 2005. – 20 p. – Access mode URL: <https://www.oecd.org/pisa/35070367.pdf> [Date of access 27.09.2024].

[2] Harvey, L. Analytic Quality Glossary, Quality Research International. – 2004-21. - Access mode URL: <http://www.qualityresearchinternational.com/glossary/> [Date of access 26.09.2024].

[3] Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. - Official Journal of the European Union (2006/962/EC). – Access mode URL: <https://eur-lex.europa.eu/eli/reco/2006/962/oj> [Date of access 30.09.2024].

[4] Joynes, C., Rossignoli, S., Fenyiwa Amonoo-Kuofi, E. 21st Century Skills: Evidence of issues in definition, demand and delivery for development contexts (K4D Helpdesk Report). Brighton, UK: Institute of Development Studies. 2019. – 75 p. – Access mode URL: https://assets.publishing.service.gov.uk/media/5d71187ce5274a097c07b985/21st_century.pdf [Date of access 28.09.2024].

[5] Ilomäki, L., Kantosalo, A., Lakkala, M. What is digital competence? - EUN Partnership AISBL, 2011. – Access mode URL: <https://core.ac.uk/download/pdf/33734457.pdf> [Date of access 20.09.2024].

[6] Lucas M. Facilitating Students' Digital Competence: Did They Do It? - Conference Paper. September 2019. - University of Aveiro, Aveiro, Portugal. – 13 p. – Access mode URL: https://www.researchgate.net/publication/335698926_Facilitating_Students'_Digital_Competence_Did_They_Do_It [Date of access 28.08.2024].

[7] Kosimov, S., Rafiqova, M. and Murodova, M. Implementation of the Technological Competence of Future Specialists. – In: Creative Education, Vol.12 No.3, March 2021, p. 666-677. – Access mode URL: <https://www.scirp.org/journal/paperinformation.aspx?paperid=108048> [Date of access 25.09.2024].

[8] Woodford Ch. Analog and Digital. – Electronic resource. Access mode URL: <https://www.explainthatstuff.com/analog-and-digital.html> [Date of access 24.10.2024].

[9] Buenger A.W. Digital Convergence and Cybersecurity Policy. - National Defense University, USA. – In: Handbook of Research on Public Information Technology. – 2008. – Access mode URL: <https://www.igi-global.com/chapter/digital-convergence-cybersecurity-policy/21265>. – [Date of access 30.09.2024].

[10] Yates S., Rice R.E. (Eds.) The Oxford Handbook of Digital Technology and Society. - Oxford University Press, 2020. — 1049 p.

[11] Berestova A., Filyanina N.N., Sukhanova T., Lysenko N. Application of information and communication technologies in linguistics: Influence

on competences and learning outcomes of students. – Laplage em Revista (International), vol.7, n. Extra C, 2021. - p.495-506. – Access mode URL: file:///C:/Users/%D0%A2%D0%B0%D1%82%D1%8C%D1%8F%D0%BD%D0%B0/Downloads/1038-Texto%20do%20Artigo-1699-2-10-20210703.pdf [Date of access 21.09.2024].

[12] Bowker Lynne. Computer-Aided Translation Technology: A Practical Introduction. - University of Ottawa Press, 2002. — 185 p.

[13] Goldsmith E. SDL Trados Live. – Blog, 17 August 2020. – Access mode URL: <https://signsandsymptomsoftranslation.com/2020/08/17/sdl-trados-live/> [Date of access 28.09.2024].

[14] Tarasenko, R.O., Amelina, S.M., Azaryan, A.A. Features of the use of cloud-based translation systems in the process of forming information competence of translators. - Proceedings of the 6th Workshop on Cloud Technologies in Education (CTE 2018), Kryvyi Rih, Ukraine, December 21, 2018. CEUR Workshop Proceedings 2433, p.322–335. – Access mode URL: <http://ceur-ws.org/Vol-2433/paper21.pdf> (2019). [Date of access 10 Sep 2024].

[15] Tarasenko R.O., Amelina S.M., Azaryan A.A. Improving the content of training future translators in the aspect of studying modern CAT tools. – 2020. - P. 360-375. - Access mode URL: <http://ceur-ws.org/Vol-2643/paper21.pdf> [Date of access 25.09.2024].

ТІЛДІК СТУДЕНТТЕРДІҢ КӘСІПТІК ОҚЫТУДА ЦИФРЛЫҚ ҚҰЗЫРЕТТІЛІКТІ ҚАЛЫПТАСТЫРУ

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Аңдатпа. Мақалада лингвистика саласындағы цифрландыру жағдайында болашақ аудармашыларды даярлау мазмұнын жетілдіріп жақсартуды, аудармашылардың цифрлық құзыреттілігін қалыптастыру мәселесі қарастырылған. Бұл мақалада мамандыққа байланысты тапсырмаларды орындау кезінде цифрлық құзыреттілігін дамытуға көмектесетін технологиялар мен әдістерді мұғалімдердің пайдалануы туралы студенттердің түсініктерін ұсынуға бағытталған.

Кәсіби цифрландыру саласындағы оқу үдерісінің артықшылықтарын түсіне отырып, кәсіби білім беруді Цифрландыру Кафедрасы жоғары оқу орындарының аударма студенттеріне бакалавриат деңгейінде оқитудың цифрлық материалдарын қолдана отырып, цифрлық құзыреттілікті дамытуға бағытталған курсты құрастырып бастады. Moodle платформасында ұйымдастырылған курсты мұғалімдер басқаратын сабақтар мен өздігінен

жұмыс жасауға мүмкіндік беретін онлайн курс ретінде пайдалануға болады. Зерттеу барысында цифрлық сабақтарды ұйымдастырудың бастапқы жағдайын жақсы түсіну үшін, сауалнама жүргізілді. Бұл мақала лингвистикалық студенттердің кәсіби цифрлық құзыреттілігін қалыптастыруды технологияларын зерттеуге арналған. Сондай-ақ, мақалада «цифрландыру» және «цифрлық құзыреттілік» терминдерінің анықтамаларына талдау жасалған, цифрлық материалдардың мақсаттары мен мазмұны, олардың курстағы құрылымы және олар дамытатын негізгі цифрлық кәсіби дағдылары сипатталған.

Бұл зерттеудің практикалық құндылығы мамандандырылған лингвистикалық дайындық аясында цифрлық құзыреттілікті дамытуға ықпал ететін ең маңызды технологиялық ресурстар мен құралдарды анықтауында жатыр. Сондай-ақ, ол лингвистика және аударма мамандықтары бойынша оқитын студенттер арасында негізгі кәсіби дағдыларды жүйелі түрде қалыптастыруды тиімді қолдау және ілгерілету үшін тиісті АКТ құралдарын оқу бағдарламасына бейімдеуді және енгізуді ұсынылады.

Тірек сөздер: цифрлық құзыреттілік, цифрландыру, технология, кәсіби дайындық, машиналық аударма, лингвистикалық студент, аудармашы, САТ жүйелері, АКТ құралдары

ФОРМИРОВАНИЕ ЦИФРОВОЙ КОМПЕТЕНЦИИ В ПРОФЕССИОНАЛЬНОЙ ПОДГОТОВКЕ СТУДЕНТОВ-ЛИНГВИСТОВ

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Аннотация. Статья посвящена вопросу совершенствования содержания обучения будущих переводчиков в условиях цифровизации в области лингвистики и формированию цифровой компетенции переводчиков. Целью данной статьи является представление мнений студентов относительно использования преподавателями технологий и методов для содействия развитию их цифровой компетенции при выполнении профессионально-ориентированных задач.

Осознавая преимущества образовательного процесса в сфере профессиональной цифровизации, на кафедре цифровизации профессионального образования запущен курс, направленный на развитие цифровых компетенций с помощью цифровых материалов для обучения переводу студентов университета на уровне бакалавриата. Курс,

организованный на платформе *Moodle*, можно использовать как онлайн-курс, предоставляющий возможности проведения уроков под руководством преподавателя и для самостоятельного обучения. В ходе исследования был проведен опрос с целью изучения исходной ситуации для организации цифровых уроков. Данная статья посвящена исследованию технологий для формирования профессиональной цифровой компетенции студентов-лингвистов (переводчики бакалавриата). В статье также дается анализ определений терминов «цифровизация» и «цифровая компетенция», описываются цели и содержание цифровых материалов, их структура в курсе и основные цифровые профессиональные навыки, которые они развивают.

Практическая ценность данного исследования заключается в определении важнейших технологических ресурсов и инструментов, способствующих развитию цифровой компетентности в рамках специализированной лингвистической подготовки. Оно также предполагает адаптацию и интеграцию соответствующих средств ИКТ в учебную программу образовательного процесса с целью эффективной поддержки и стимулирования систематического формирования ключевых профессиональных навыков у студентов, специализирующихся в области лингвистики и перевода.

Ключевые слова: цифровая компетенция, цифровизация, технологии, профессиональная подготовка, машинный перевод, студент-лингвист, переводчик, САТ системы, средства ИКТ

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