

DEVELOPMENT OF DIGITAL COMPETENCE OF FUTURE PHILOLOGISTS: CASE OF TURKISH AND UKRAINIAN UNIVERSITIES

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Abstract. *The paper calls into question the development of the digital competence of future philologists, taking into account the Turkish and Ukrainian experiences. The study of digital competence development is attracting increasing interest due to a growing need for experts capable of processing the enormous streams of continuously transmitted information and experts willing to improve their digital skills for professional growth. The purpose of the study is to broaden the current knowledge about the ways of developing digital competence. In this respect, the paper investigates two systems of future philologists' training in Ukraine and Turkey in the Digital Tools for Translation course. The authors analyze the experience of the Turkish and Ukrainian higher education institutions regarding the use of appropriate ICT tools using theoretical and empirical methods. Fifty-two future philologists from Turkey and Ukraine took part in the research. The study presents the results from observing the training and interviews with Ukrainian and Turkish students. The Shapiro-Wilcoxon method (non-parametric criterion) was used to verify the results. An analysis has highlighted the positive experience of Turkish universities, which can be implemented in future philologists training in Ukrainian universities. The findings of this study support the idea that the insufficient level of digital competence development lengthens and complicates the period of adaptation of graduates to modern working conditions. The authors found that the integration of Ukrainian higher education into the European higher education area occurs in times of globalization and the digitalization of society, which radically changes the nature of many activities. This research has clearly shown that digital competence development is more effective with the implementation of a holistic approach when students enhance digital competence while acquiring all other competencies. Our research suggests that the digitalization of education reduces the gap between graduates' digital competence level and modern society's expectations.*

Keywords: *digital competence development; future philologists; Republic of Turkey; information and communication technologies; holistic approach.*

1. INTRODUCTION

The last two years in Ukraine have witnessed an urgent need to change approaches to the professional training of philologists due to the COVID-19 pandemic, the unprecedented challenges of the military aggression of the Russian Federation, general and linguistic globalization, the digitalization of the educational space, and the deepening of national self-awareness. Development of the readiness to perform professional duties in any uncertain situation is gaining significance, which leads to the need to update the content and organization of the educational process following the radical changes in society and the priority areas of state policy for further development of the higher education system determined by the Ministry of Education and Science of Ukraine. Recent events regarding the Ukrainian military personnel training abroad have led to the need for many philologists capable of translation.

At the same time, the full-scale invasion of Russia on the territory of our country brought closer the possibility of Ukraine joining the European Union, a full member of which it thought to be since its declaration as an independent state. It is stipulated in the National Doctrine of Education Development. At the beginning of 2023, there was a report

on the fulfilment of 40% of the indicators of the Roadmap for integrating the scientific and innovative system into the European Research Area. The intention to maintain European integration progress and to ensure the implementation of European principles, approaches, and practices in the educational and scientific spheres was confirmed.

It is vital that the countries of the European Union autonomously choose the model of education and create independent educational systems in accordance with their national needs and educational traditions. However, the growth of opportunities for Ukrainian students to obtain higher education in the countries of the European Commonwealth presupposes the compatibility of our educational system with the unified European requirements. Studying the experiences of countries that have also chosen the path to European integration is essential for ensuring relevant changes. The Republic of Turkey, as a candidate country for EU membership, has also received recommendations and regularly sends reports to the EU on the progress made in bringing its education system up to the standards. Established in 2015, the Turkish Higher Education Quality Council (Yükseköğretim Kalite Kurulu, YÖKAK) aims to facilitate the continuous development of higher education institutions. The country adopted several laws and regulations, introduced the Bologna process, and is reforming the professional education system in accordance with the Qualifications Framework in the European Educational Space (Qualifications framework).

The integration of Ukrainian education and science into the European information and educational space is possible due to the global digital transformation of society, accompanied by the rapid advancement of information and communication tools. The shift from an industrial to a knowledge-based society has changed the nature of work. The progress in information technologies manifested the changes in the significant professional competencies of philologists. Horton (2008) identifies the most crucial proficiencies: critical thinking, comprehensive education, competence in information and communication technology, aptitude for decision-making, capability to handle challenging situations, teamwork, and effective communication skills.

In our study, we consider a philologist's digital competence as the ability to use information and communication technologies to analyze and interpret texts, work with databases, communicate, collaborate, and share research outcomes, create e-books, online magazines, blogs, social media, etc., as well as the willingness for life-long learning to keep up with the rapid societal and technological changes.

The core idea of the study is that an insufficient level of digital competence lengthens and complicates the period of adaptation of graduates to modern working conditions, and the level of digital competence of philologists may be increased with the implementation of a holistic approach during the future philologists training. In the 2022 State of the Union address, the European Commission President Ursula von der Leyen proposed to make 2023 the European Year of Skills. It should be reflected in the philology students' professional training. Researchers have always associated Philology with language, literature, and culture, but in our increasingly digital world, philologists can only effectively perform their professional duties with digital literacy.

The analysis of the Concept of Digital Transformation of Education and Science draft for the period till 2026 (May 25, 2021) shows that the attention needs to be more focused on the insufficient level of teachers' and students' digital competence. The

document also reveals the inconsistent curriculum content with up-to-date needs and requirements. Among other significant aspects is the lack of computers, broadband capacity, and high-quality digital educational content in universities.

A remarkable feature of digital competence is its persistent dynamics; the rapid advancement of digital technologies complicates its content and requires mastering a number of new skills, abilities, and knowledge of new technologies, such as artificial intelligence, Chat GTP, etc.

The issue of developing digital competence in future philologists is challenging due to the rapid advancement in technology. Thus, our study aims to broaden the current knowledge about digital competence development, study the experience of the Turkish and Ukrainian higher education institutions regarding the use of appropriate ICT tools, and discuss the results of implementing the holistic approach and Digital Tools for Translation course. With this in mind, we tried to study the regulations concerning the digitalization of higher education in Ukraine and the Republic of Turkey; define the role of digital competence in the system of philology students' competencies; select the ICT tools that can be effectively used during the implementation of the Digital Tools for Translation course; and identify the significance of holistic approach in the process of philologist's digital competences development.

2. METHODS

General Background of Research

A complex of interrelated scientific research methods has been used to achieve the study goals. The main theoretical methods used in the study are the comparative analysis of the specificities of future philologists training in Turkey as an associated member of the European Union and Ukrainian universities. The additional theoretical methods used in the study are the terminological analysis to define the key concepts of digital competence and holistic approach; the chronological and causal analysis to explore the problem of the development of digital competence, to highlight the main results of comparative studies made by researchers; the content analysis of the curriculum of future philologists in Turkey and Ukraine to determine the peculiarities of their training.

The empirical methods used in the study were observing the educational process when digital competence was developed during the Digital Tools for Translation course and the quantitative and qualitative analysis of experimental data to identify the advantages and disadvantages of tools used to develop digital competence.

Participants

To illustrate the applicability of the above holistic approach for future philologists' training and the Digital Tools for Translation course, we conducted the study among 52 future philologists. The future philologists are students in their third year of study at the Faculty of Economics and Administrative Sciences at Kirsehir Ahi Evran University and the Department of Foreign Languages and Translation at National Aviation University. The sample was divided into four groups of students (TG-1 UA, TG-2 TU, AG-1 UA, and AG-2 TU) of similar size (13 students). Four groups participated in the testing study from September 2022 to May 2023.

Two testing groups of future philologists attended the Digital Tools for Translation course. They experienced the holistic approach implementation, while two academic groups of future philologists were subject to the Digital Tools for Translation course training (the holistic approach in training these two groups was not implemented).

To study the experience of Turkish higher education institutions regarding the use of appropriate ICT tools six Turkish universities were chosen (Kırşehir Ahi Evran Üniversitesi, Batman Üniversitesi, Necmettin Erbakan Üniversitesi, Samsun Üniversitesi, Çankırı Karatekin Üniversitesi and Erciyes Üniversitesi). The Memorandums of Cooperation, Bilateral Agreements on the Academic Mobility of Students and Teachers under the Erasmus+ Program, and Protocols on the Academic Mobility of Students and Teachers under the MEVLANA Program have been signed. The internship at the Department of Pedagogy of Kırşehir Ahi Evran University ("Training for Trainers", 108 hours in 2018) and "Higher Education in the 21st Century: Challenges and Innovations" (108 hours in 2019), participation in the 1st and 2nd International Congresses "People, Power and Politics" and in the Erasmus+ project KA203 (Cooperation among organizations and institutions, Strategic Partnership) allowed us to conduct our study and explore innovative processes in the field of higher education of the Republic of Turkey. Their curricula for professional training of philologists, admission requirements, terms of study, degrees, and diplomas have also been analyzed.

Instruments and Procedures

To verify the efficiency of digital competence development during the Digital Tools for Translation course and the significance of the impact of holistic approach implementation during the future philologists' training, the Shapiro-Wilcoxon method (non-parametric criterion) was used.

The empirical data that formed Intervals below were given due to the "learning quotient" formula:

$$LQ = \frac{I_p}{T_p}$$

where LQ means learning quotient, I_p means the total number of tasks successfully performed by a student, T_p means the maximum number of tasks that a student could perform. This formula was used to identify the "learning quotient" of future philologists from testing and academic groups.

Paying attention to the fact that some of the values occur only once in one sample (for example, the value 0,35) while other values (for instance, value 0,15) occur in four or three samples at the same time, we concluded that it is impossible to use each sample value for Shapiro-Wilcoxon method. Therefore, we adapted our calculation according to the Shapiro-Wilcoxon method requirements. Rather than analyze each sample value frequency, we built intervals that cover all values that occurred in the samples.

So, in an attempt to build equal-length Intervals, we suggested using four Intervals according to the "learning quotient" results in testing groups:

Interval 1 = [0,6; 0,69)

Interval 2 = [0,69; 0,78)

Interval 3 = [0,78; 0,89)

Interval 4 = [0,89; 1).

The same procedure was applied to the results in academic groups, thus, there were four Intervals equal in length according to the "learning quotient" results:

Interval 1 = [0,06; 0,15)

Interval 2 = [0,15; 0,26)

Interval 3 = [0,26; 0,41)

Interval 4 = [0,41; 0,6).

For the sake of simplicity, the Wilcoxon method is used in groups where the number of students is less than 25. After analyzing the experimental data the absolute values of the shifts are ranked and then the ranks are summed.

To identify minimum and maximum values the following formulas are used:

$$W = n (n+1)/2$$

where n is the range of the second sample to identify the minimum value.

And

$$W = n (n + 1) / 2 + mn$$

where n is the range of the second sample, and m is the range of the first sample.

In this study, authors use it to identify the maximum value.

The sum of their ranks will be approximately equal if shifts in one direction or another occur randomly. Our experimental set-up is practically the same as the one proposed by McElreath (2015); according to it, the impact is significant if the intensity of the shifts in one direction is higher and the sum of the ranks of the absolute values of the shifts in the opposite direction is lower than it could be with random changes.

Exploiting the Shapiro-Wilcoxon method, the impact is significant if values in the Intervals in each group are equal or higher than 0,6. If values in samples are equal or higher than 0,6, it means that future philologists have made significant progress or show steady improvement in digital competence level. If values in samples are lower than 0,6, it means that future philologists have some difficulty achieving good results using some digital tools.

3. RESULTS

The quantitative and qualitative analysis of experimental data indicates that testing groups of future philologists who attended the Digital Tools for Translation course and experienced the holistic approach implementation demonstrated better results than academic groups where students only attended the Digital Tools for Translation course training.

Table 1 indicated that all Intervals in testing groups are equal or higher than 0,6, whereas values in academic groups are lower than 0,6. Thus, there is a reasonable probability that implementing the holistic approach and Digital Tools for Translation course will significantly impact the development of digital competence in future philologists.

Table 1. The results (values and intervals) in testing and academic groups



RESUL		<i>Sample 1 (Academic Groups)</i>			
TS	Interval	Interva	Interval	Interval 3	Interval 4
	I 1	2			
Values	0,15	0,26	0,41	0,6	
		EFFECT ABSENTS 			
RESUL		<i>Sample 1 (Testing Groups)</i>			
TS	Interval	Interva	Interval	Interval 3	Interval 4
	I 1	2			
Values	0,69	0,78	0,89	1	
		EFFECT PRESENTS 			

Figure 1 indicated that 5 students in testing group 1 (TG-1 UA) and 7 in testing group 2 (TG-2 TU) possess a high level of digital competence. It is bigger compared to the academic group 1 (AG-1 UA), where only 4 students possess a high level of digital competence, and in academic group 2 (AG -2 TU) where 3 students possess a high level of digital competence.

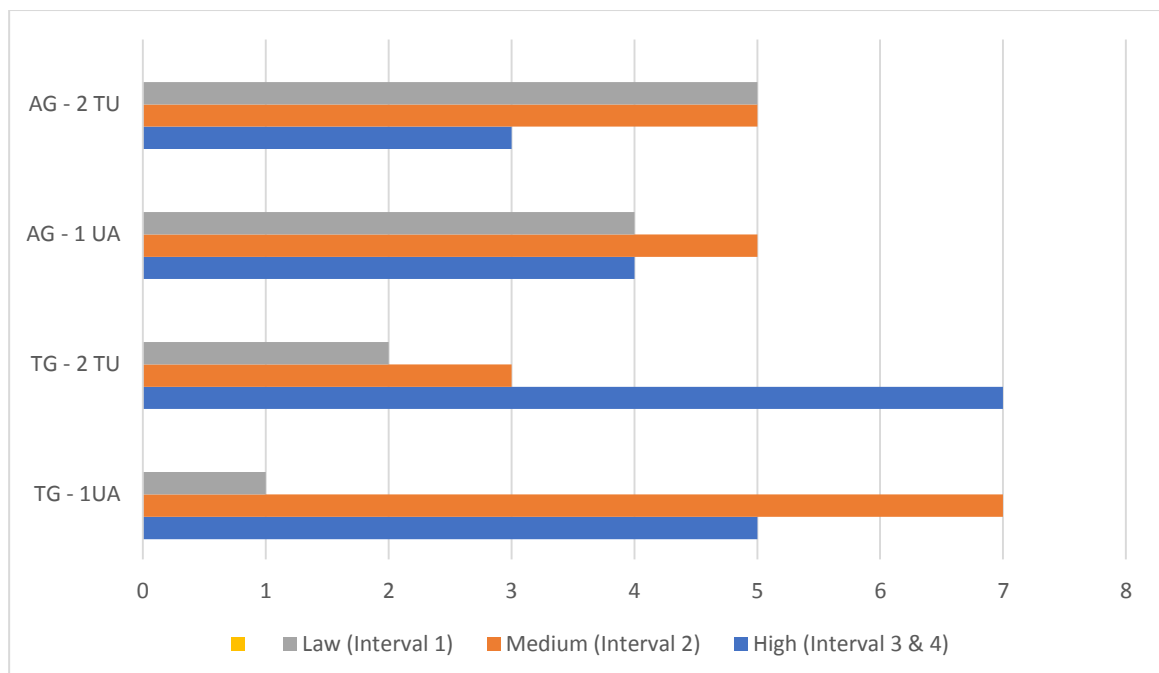


Figure 1. The results demonstrated by future philologists during the Digital Tools for Translation course in combination with the holistic approach implementation

The results of experimental data pinpointed in Fig. 1 and intervals in testing and academic groups in Table 1 can be described as follows. As exemplified in testing group 1 UA, the results that are demonstrated by 1 student with a low level are located in the range of Interval 1, and the results that are demonstrated by 7 students with a medium

level are located in the range of Interval 2, and the results that are demonstrated by 5 students with high level are located in the range of Intervals 3 and 4.

The analysis of the following documents: the European conceptual reference model of the Digital Competence Framework for Citizens (Dig Comp 2.0: Digital Competence Framework for Citizens), the EU Framework for Educators (The Digital Competence Framework for Educators), the ESCO European Multilingual Classification of Skills, Competences and Professions (European Skills, Competences, Qualifications and Occupations), Description of the framework of digital competence for citizens of Ukraine of the Ministry of Digital Transformation of Ukraine Dig Comp UA for Citizens 2.1, 2021, Conceptual and reference framework of digital competence of pedagogical and scientific and pedagogical workers of the Ministry of Digital Transformation of Ukraine (project, 2021) and National framework of qualifications for higher education in Turkey (National Qualifications Framework for Higher Education in Turkey, NQF-HETR) revealed the digital resources that were used within The Digital Tools for Translation course.

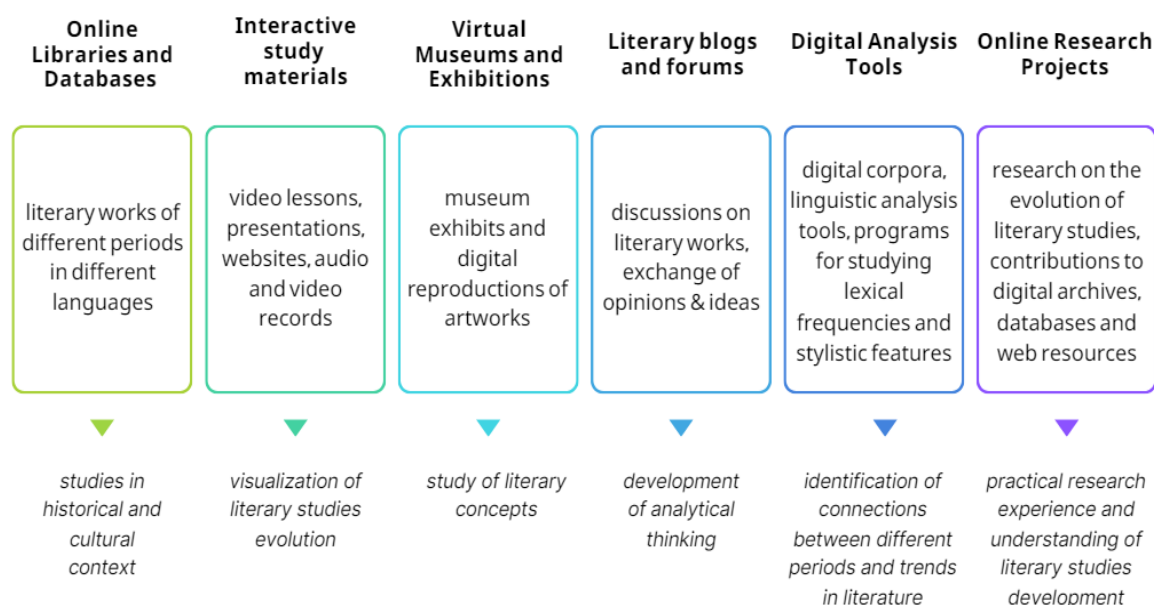


Fig. 2. ICT tools within The Digital Tools for Translation course

The qualitative analysis highlighted in Fig. 2 shows digital tools that can be used to develop the ability to comprehend literature as a polysystem and understand the evolutionary path of the development of native and world literary studies.

This qualitative analysis of documents also widens our knowledge of the ability to apply in-depth knowledge of the chosen philological specialization to solve professional tasks. This ability is closely connected with the confident use of special terminology in the chosen field of philology and the awareness of the role of expressive, emotional, and logical means of language to achieve the planned pragmatic result. It gave us the possibility to combine some digital tools. Fig. 3 suggests ICT, effectively used during the Digital Tools for Translation course and aimed at developing the above-mentioned competencies specified in the standard of higher education in specialty 035 "Philology" (2022).



Fig. 3. ICT for the development of competencies specified in the standard of higher education in specialty 035 “Philology”

4. DISCUSSION

The paper's primary purpose was to draw attention to the importance of developing digital competence in future philologists while acquiring other competencies. That is why introducing The Digital Tools for Translation course is even more effective with the implementation of a holistic approach.

To identify the information and communication technologies that are professionally significant in the philologists' professional training (Fig. 4), we analyzed the qualification requirements in the curricula at Turkish universities and identified the competencies that future philologists are obliged to possess.

Our findings align with the results of Uskudarli et al. (2023) concerning the vast amount of social media content obtained using text analysis methods that are constantly being improved. However, the distinctive feature of the Turkish language, namely its agglutinative nature (new words and grammatical forms are formed with the help of affixes), complicates the search, so universities in Turkey include text analysis tools in their linguistic and philological programs. OpenAI GPT (Generative Partied Transformer) and other artificial intelligence tools are commonly used along with the Turkish Language Processing Platform (TULAP), which provides open-source Turkish NLP (Natural Language Processing) resources developed at Bogazici University.

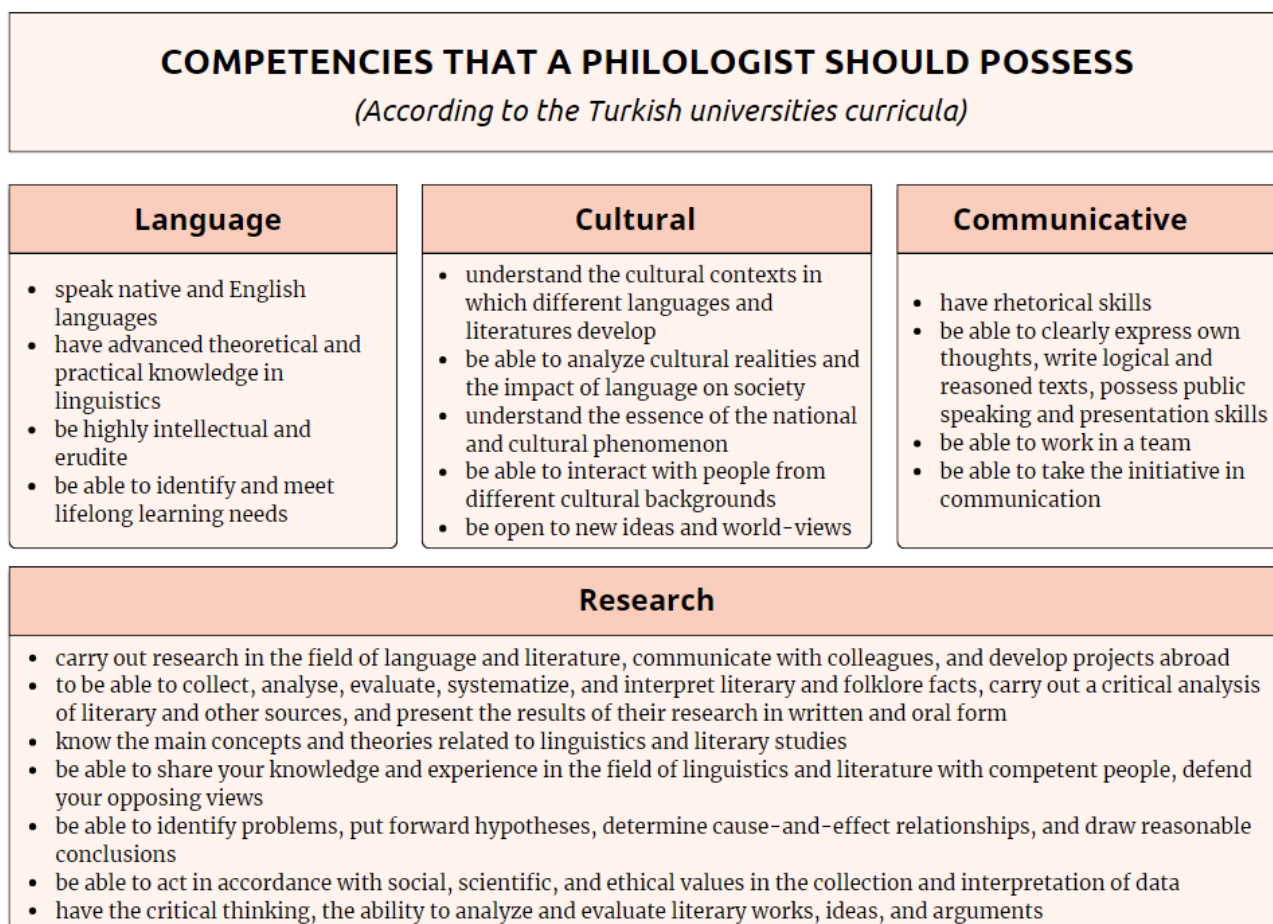


Fig. 4. Important competencies in philologists' professional training

Our results are in line with Nguyen et al.'s (2023) findings about the studies on artificial intelligence for education that revealed some ethical challenges and showed the necessity of clear rules and norms before artificial intelligence (AI) technologies are integrated into the educational process. The insights gained from the American scientists' experience proved valuable for our research. Having studied it, we concluded that it is not advisable to ban GPT since it can be considered a violation of academic freedom. The better way is to change approaches to their use in the educational process. For example, George Washington University, Rutgers University, and Appalachian University are phasing out open-ended homework assignments in favor of hand-written classroom assignments, oral exams, and questions that preclude the use of AI. More and more universities willingly train students to work with new AI tools. An example of a balanced approach to solving this problem is the decision of the University of Buffalo and Furman University (USA) to include a discussion on artificial intelligence use in the mandatory course on academic integrity for first-year students. The forms and methods for evaluating students' educational achievements should also undergo significant changes.

The analyses of Ukrainian and Turkish documents showed that the use of digital technologies is included in any curriculum topic. However, there are no official recommendations for their use in the professional training of philologists either in Ukraine or the Republic of Turkey. They are only considered at the level of scientific research. Since technologies arise and develop very quickly, it is impossible to specify the tools in

the curricula. Consequently, due to the lack of unified requirements and clarifications, digital technologies are not effectively used in the professional training of philologists. An example of a document that can help solve the problem is the "Unified Requirements of the Ukrainian IT Industry for Beginners" (2022), developed by the "IT Ukraine" Association. This document, which was introduced by specialists from the EPAM, Soft Serve, Ciklum, Global Logic, Insart, Innovecs, Luxoft, SPD Ukraine, Terrasoft and Astound Commerce companies, aims at students and encourages universities to adapt their educational programs to market requirements and purposefully develop the professionally significant digital skills. The document provides "novice" and "intermediate" levels for every skill. In our opinion, such a unified system could significantly increase the efficiency of using innovations in the philologists' professional training.

As for text analysis tools, Grammarly, MonkeyLearn, Awario, and the like mood and intention analyzers should be noted. They will help teach students to feel the mood and emotions of written or received text and choose the appropriate tone of communication in social networks, Internet communities, and correspondence.

We believe that the development of a philology student's ability to freely navigate in different linguistic areas and schools (a significant special competence) requires a combination of theoretical knowledge, practical application, and thorough work with various linguistic resources. Electronic dictionaries, grammar guides, language learning platforms and linguistic databases provide access to a wide range of linguistic information and facilitate research in various linguistic areas.

Evidence suggests that communication with native speakers is the best way to learn about different language traditions and gain insight into a variety of linguistic perspectives. In both countries, motivated students willingly join forums and scientific communities in philology and linguistics social networks, which promote communication and exchange of ideas. They provide an opportunity to receive advice and consultations from well-known experts from various linguistic areas and schools. Online courses, video conferences, webinars and lectures by teachers from the world's leading universities are also accompanied by real-time communication with the lecturer and participants. However, only some students take advantage of the opportunity to send an e-mail with questions or a request for advice, as well as to contact philological organizations, universities and research centers to get the information they need.

An integral part of a philologist's professional training in both countries is using digital corpora for language analysis and research. It enables the ability to differentiate data from numerous linguistic traditions and schools. The sources of information about linguistic trends, like databases and repositories, provide access to the latest scientific research and encourage students to analyze, synthesize information from different points of view, and carry out comparative linguistic analysis.

The results point to the probability that another important ability of future philologists is the ability to critically comprehend historical heritage and the latest achievements of philological science. To develop this ability, we propose the search engines for academic texts: Base (one of the largest in the world, providing access to more than 240 million documents from more than 8,000 content providers); Semantic Scholar (based on artificial intelligence); WorldWideScience.org (a global scientific search engine consisting of many national and international databases and scientific portals), etc. Open Scientific Resources

of Ukraine, National Repository of Academic Texts, Scientific Periodicals of Ukraine and Scientific Electronic Library of Periodicals of the National Academy of Sciences of Ukraine, World Science, information and analytical system "Bibliometrics of Ukrainian Science" also contribute to this ability development. In Turkey, the commonly used are ULAKBIM DergiPark (comprehensive academic publishing platform), Türkiye Atıf Dizini (Turkish Citation Index), DergiPark (academic online platform hosting Turkish scientific journals, reports and dissertations) and Akademik Türkçe (focused on Turkish-language academic resources).

It seems likely that Google Scholar is the most popular, freely accessible search engine in both countries. Ukrainian universities get free access to Research4Life, Bentham Science, CUL online, SCOPUS, ScienceDirect, Web of Science, EBSCO, and some other databases. Turkish university libraries also have numerous free and subscription databases for faculty and students. Some of the information and communication technologies that are used for this competence development are presented in Fig. 5.

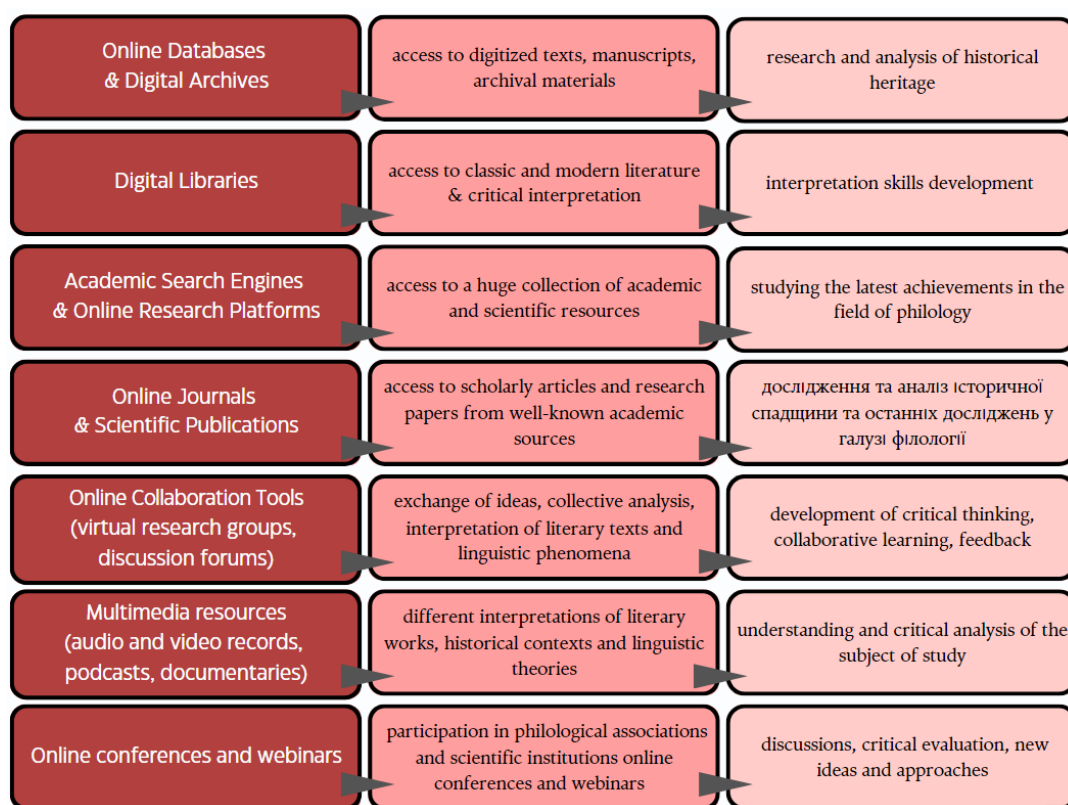


Fig. 5. ICT for the development of the ability to critically comprehend historical heritage and the latest achievements of philological science

It would appear that the development of the ability to carry out scientific analysis and structuring of language/speech and literary material taking into account classical and modern methodological principles, is facilitated by the use of Corpus Linguistics Tools like AntConc (a tool for finding clusters – frequency patterns of sequences of words, or n-grams – sequences of n words within a corpus or document); Sketch Engine (a tool for studying how language works; its algorithms analyze authentic texts containing billions of words to instantly determine what is typical in a language and what is rare, unusual or new) and WordSmith Tools (a set of modules for finding patterns in a language). Students

learn to look for, annotate, and analyze linguistic patterns, word frequency, collocation, and agreement by applying quantitative methods to analyse language and observing language use across genres and time periods.

The analysis suggests that Ukrainian higher education institutions widely use text annotation and markup tools (TextAnnotation and Markup Tools) for analyzing and structuring literary materials, which contribute to a systematic approach to text analysis and facilitate their comparison. This is common while teaching the academic disciplines "Methodology of scientific research and academic writing" to first- and second-year Master's Degree students and "Fundamentals of scientific research" to first- and second-year Bachelor's Degree students.

Digital Storytelling Platforms such as Scalar, StoryCorps, Listening Project, The Tale of a Town, The Story Project and Omeka have proven themselves in both countries. Students learn to analyze and structure linguistic and literary material digitally. Presenting linguistic and literary data in visual formats using Data Visualization Tools such as Tableau and Infogram enables the effective transferring of complex information and data analysis through the creation of charts, graphs, and interactive visualizations to illustrate patterns, and trends of connections in literary material.

Tools for collaborative writing and editing (Collaborative Writing and Editing Tools) – Google Docs and Microsoft Word Online – provide teamwork on scientific articles, analysis and literary interpretations. Working together in real-time, students analyze texts based on classical and modern methodological principles.

To the best of our knowledge, virtual reality (VR) and augmented reality (AR) technologies are not often used in universities in Turkey and Ukraine due to the lack of appropriate equipment. The ability to virtually navigate historical contexts, interact with characters in literary works, or visualize language structures could provide a unique experience and engage students in a dynamic and interactive learning environment.

We agree with Pryhoda (2013), who suggests that every student should recognize their potential role in generating intellectual property. Understanding the methodological, organizational, and legal foundations of scientific research is most effectively achieved by creating one's own invention and filing a patent application. Every student should understand that he is a potential source of the creation of intellectual property objects; awareness of the methodological, organizational and legal foundations of scientific research is best developed by creating their own invention and filing a patent application. In this way, a student gets the opportunity to go through all the stages of this process in practice and learn the normative legal acts.

Our results correlate favorably with Dobronravova et al. (2018) and further support the idea that students' involvement in scientific and research work in Ukrainian universities is an integral part of the educational process, therefore students' mastery of the methodological, organizational and legal foundations of scientific research and norms for the protection of intellectual property on the results of research and innovation is reflected in the educational programs, in particular the disciplines "Methodology and organization of scientific research with elements of intellectual property" at Taras Shevchenko Kyiv National University. The peculiarity of the program is that it was developed by a group of teachers from all faculties of the university, including heads of scientific and methodological departments. The program was developed in cooperation with lawyers of

the Department of Intellectual Property after the approval of the course during the year by professors and assistant professors of the Department of Philosophy and Methodology of Science.

Studying the history of philology development and its outstanding inventors in the field of the history of Turkic languages and comparative linguistics (Ahmet Bican Ercilasun and Talat Tekin); cultural and historical aspects of the Ottoman era (Halil İnalçık, İsmail Hakkı Uzunçarşılı, Mehmet Fuat Köprülü, Mübahat Küçüköğlü and İsmail E. Erünsal); Turkic epic and folklore (Pertev Naili Boratav and Mümin Çevik); various aspects of Turkology, including linguistic typology, historical linguistics, sociolinguistics and literary analysis are the driving force of the motivational mechanism for Turkish students innovative activity.

The innovative developments in the field of philology are effectively carried out with the help of Research Management Systems. Mendeley, Zotero and EndNote are the most popular in both countries. They are powerful tools for gathering and organizing information, including bibliographic references, citations, and sources for research work. Unlike academic philologists who prefer to save peer-reviewed publications, students use Zotero as a bookmark manager and a place to store articles and web pages for later annotation. Reference and Citation Management Tools such as APA Style, MLA Style, or Chicago Manual of Style guide students to proper citation formats and referencing styles. Intellectual Property Protection Tools like Creative Commons licenses help students understand and apply appropriate licenses to their research and presentations. These tools provide a framework for sharing and protecting intellectual property rights. Academic integrity in both countries is considered an integral component of the quality of higher education. The Code of Academic Integrity of the National Agency for Quality Assurance of Higher Education (NAZYAVO, 2019) ensures compliance with the rules of academic integrity in the scientific and educational community. Acquainting students with the norms of compliance with its principles and developing the ability to use Plagiarism Detection Software contributes to increasing the competitiveness of Ukrainian and Turkish higher education institutions. The American Council for International Education in Ukraine, with the support of the US Embassy and in partnership with the Ministry of Education and Science of Ukraine, implemented the Strengthening Academic Integrity in Ukraine Project (SAIUP). Universities in the Republic of Turkey have a national independent plagiarism detection software, İntihal.net (Academic Plagiarism), introduced by the Scientific and Technological Research Council of Turkey (TÜBİTAK). Antiplagiat, Content-watch, StrikePlagiarism, PlagiarismCheck, EduBirdie, Unichec, etc are popular in Ukraine.

Compliance with the rules regarding the acquisition, exercise and protection of copyright is regulated by the Law of Ukraine No. 2811-IX, December 1, 2022 "On Copyright and Related Rights". The development of knowledge regarding the legal regulation of intellectual property relations and the acquisition of practical skills for solving specific legal situations is carried out through the academic discipline "Protection and Protection of Copyright and related rights in Ukraine", which studies the theoretical foundations of the legislative framework development in the field of regulation regarding copyright protection. In Turkey, copyright is protected by the Law on Intellectual and Artistic Works (Resmî Gazete Tarihi, 2021). To ensure that students understand and

adhere to the ethical principles of scientific research, they should visit research ethics committee websites that provide information on the ethical aspects, including participant consent, data protection, and confidentiality. Thus, it is also important to teach students how to use copyright clearance tools in their research.

5. CONCLUSIONS

The evidence from this study suggests that the philologist's digital competence development should take place against the background of the development of integral, general and special competencies through the constant use of limitless and continuously growing possibilities of information technologies. Thus, digital competence is an end-to-end competence, and its development should be given close attention at all stages of a philologist's training. Philologists' digital competence means their ability to confidently use information and communication technologies to analyze and interpret texts, work with databases, communicate, collaborate, and share research outcomes, create e-books, online magazines, blogs, social media, etc., as well as the willingness for life-long learning to keep up with the rapid societal and technological changes.

This paper has highlighted that digital competence is an important component of philologists' readiness to carry out their professional activities. Considerable progress has been made during the implementation of the holistic approach when students enhance digital competence while acquiring all other competencies.

Further work needs to be done to establish the ways to implement the Turkish universities' positive experience regarding a philologist's digital competence development in Ukrainian higher education that will contribute to the improvement of the philology students' professional training.

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Conflict of interest

The authors declare no conflicts of interest.

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