



Training Future English Teachers in the Context of Using Digital Technologies

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TRAINING FUTURE ENGLISH TEACHERS IN THE CONTEXT OF USING DIGITAL TECHNOLOGIES

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ABSTRACT:

In the era of globalization, it is crucial for individuals in various fields to possess knowledge and communication skills in multiple foreign languages, in addition to a strong command of their native language. In order to meet this demand, it is necessary to improve the learning and teaching methods of foreign languages, using more modern approaches and integrating digital technologies into lessons. Our country places significant importance on the education of innovative and creative individuals, regardless of their field of specialization. It is essential for young people to have a comprehensive understanding of the IT field and the ability to independently utilize digital technologies, as well as the capacity to learn foreign languages, particularly English.

The primary goal of digitalizing education is to enhance the quality of education and prepare young people to be competitive professionals in various fields, particularly in the realm of digital technologies. Achieving this requires transitioning to a new level of sophistication by implementing theoretical and methodological advancements in utilizing digital technologies within the educational process.

Digital technologies impact all aspects of human activity. By incorporating digital technologies into the educational process, students' motivation to learn increases. Furthermore, it facilitates research and educational activities such as searching, editing, storing, presenting, and creating information, allowing for the full utilization of the didactic potential of digital technologies. This, in turn, fosters the development of digital literacy, which can be seen as a new form of literacy.

KEYWORDS: digital technology, digitalization of education, professional competencies, digital skills

Introduction

Currently, the Republic of Uzbekistan is facing the urgent issue of developing the pedagogical education system to train qualified personnel who can think independently and make correct decisions in various situations.

According to UNESCO recommendations and the "Changing Our World: 2030 Agenda for Sustainable Development" adopted by the United Nations General Assembly, digital literacy should be integrated into all forms of pedagogical education and lifelong pedagogical activities.

In June 2021, a Swiss publisher evaluated the use of digital technologies by English language teachers, as well as their attitudes, skills, and competencies, based on the results of the International Conference on Human-Computer Interaction. A survey was conducted with the participation of 283 foreign language teachers from 43 countries. According to the survey conducted by a group of experts from Norway, Russia, Cyprus, and Greece, many foreign language teachers use various computer-based learning technologies, but they face challenges in fully utilizing these digital technologies due to inadequate technical infrastructure. Additionally, many English language teachers express dissatisfaction with their level of knowledge in the field of digital technologies, which can be attributed to a lack of professional training in this area.

Paragraph 5 of the Decree of the President of the Republic of Uzbekistan dated May 11, 2022, No. PF-134, titled "Digitalization of the education system," highlights the task of creating

information systems and electronic educational resources for the digitization of education. Future teachers should be equipped with the ability to utilize digital technologies in their professional activities and create multimedia electronic educational resources to enhance the educational process. Moreover, the decree emphasizes the importance of content enrichment on interactive virtual educational platforms such as SmartLand and Edumarket, as well as the preparation of scientific-popular short animation videos (Edukids) for primary school students.

In order to improve the professional skills of English language teachers, it is crucial to integrate digital technologies effectively into every lesson. This need for the effective use of digital technologies in English language training cannot be overstated.

The purpose of the study:

The purpose of this study is to enhance the skills of future English language teachers in utilizing digital technologies within the context of teaching "Information Technologies in Education". The study will focus on the steps, methods, and tools needed to improve these skills.

Our research not only aims to utilize digital technologies such as multimedia e-learning resources, virtual reality, and augmented reality, but also to develop the ability to independently create these resources in the professional training of future English language teachers. The ultimate goal is to effectively apply these technologies within the education system.

The research questions that will guide this study are as follows:

Research question 1:

What are the components of digital technology skills, including digital linguistic, digital technical, digital multimedia, and telecommunication skills?

Research question 2:

How can the content of the information technology course in education be designed to incorporate adaptive-analytical, searching-constructive, and creative-design stages through the use of digital educational tools?

Research question 3:

How can the "Face to Face Driver" and "Online Driver" models of blended education be applied in the teaching of information technologies in education? Can the use of methods such as the "PRES (point of view, clarification, example, conclusion)-formula" and "Web-quest" enhance student motivation and develop their digital technology skills?

Research question 4:

How can the effectiveness of teaching information technologies be improved by integrating digital technologies into education? What criteria, such as motivational-organizational, cognitive-active, reflexive-communicative, and creative-creative, can be used to assess learning outcomes at different levels (low, medium, high)

Literature review

Several scientific studies have been conducted to develop the professional competence of future English language teachers. For example, T.F.Kuzennaya [1] emphasized the importance of developing professional thinking in philological students as a crucial aspect of their professional training.

S.V.Astakhova's dissertations investigated the formation of professional competencies in philology students through pedagogical management. This research identified the essential components (axiological, cognitive, motivational, technological, and emotional-volitional) of professional competencies in philology students. It also provided insights into the psychological and pedagogical aspects of their professional training [2].

Other research works have focused on the development of specific competencies in philology students. M.A.Pakhnoskaya [3] analyzed the formation of linguistic and cultural professional competencies in students, while G.V.Kruglyakova [4] examined the content and formation techniques of professional information-communicative competencies in philology students. E.V.Frolova [5] studied the content, forms, and implementation methods of computer support in the development of language competence in students.

K.D.Riskulova's research concentrated on the formation of sociolinguistic competence in future English language teachers, defining the linguodidactic structure based on state educational standards and European (CEFR) requirements in the independent learning process [6].

M.E.Mamarajabov's research focused on enhancing the professional-pedagogical training of future teachers in the digital education environment. It emphasized the alignment of traditional and digital technologies, as well as the development of personal and professional qualities and motivation for learning during training and practical experiences [7].

D.N.Mamatov's research explored the pedagogical design methodology and technologies for preparing students for professional careers in the digital educational environment [8].

Overall, through these studies, it is widely recognized by researchers that digital technologies have a positive impact on the effective learning of the English language. Based on the definitions provided by these scholars, it can be concluded that digital literacy refers to the ability of future English language teachers to independently select and effectively apply digital technologies in the context of digitized education. It also involves interpreting, searching, creating, editing, and distributing digital information, serving as both an individual and social skill.

Methodology

It is appropriate to distinguish the following stages in improving the skills of future English language teachers in using digital technologies:

1. Adaptive - analytical stage. This stage enables future English language teachers to analyze digital technologies, to be able to consciously choose digital technologies in their professional activities, teaching technology, purpose and content, stages of organization of teaching activities, teaching English. ready digital learning resources will be directed to edit according to their conditions.

2. Prospective - constructive stage. This stage envisages the development of the skills of creating and using digital educational resources of the author in the future professional and methodical activities of future English language teachers in harmony with modern educational methods.

3. Creative - design stage. At this stage, future English language teachers will be focused on developing the skills of independent design of digital educational resources in their professional activities.

Using digital technologies, students' acquisition of knowledge related to English language acquisition is reflected in the picture below.

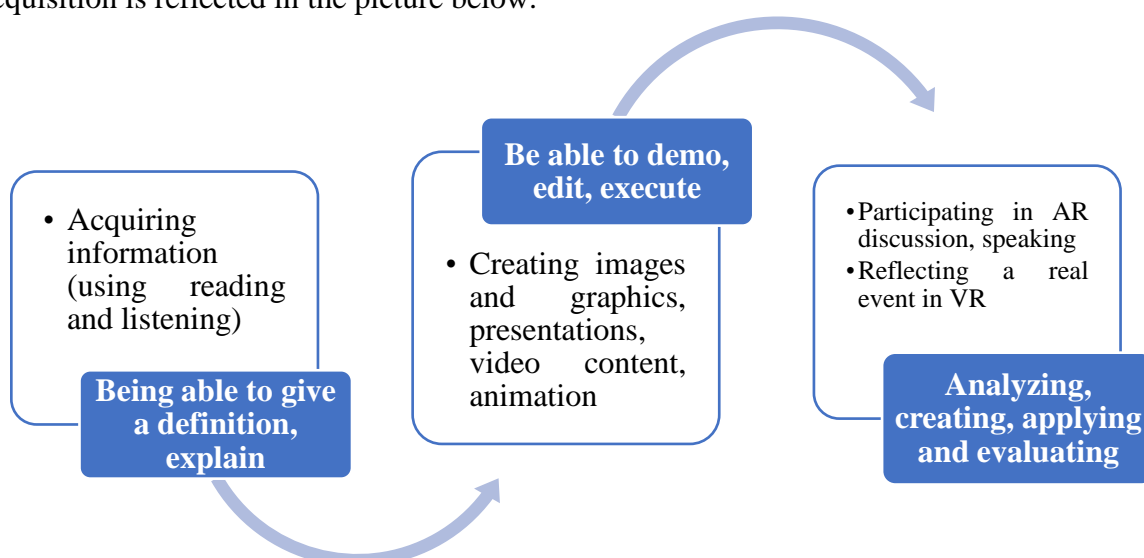


Figure 1. Training future English language teachers using digital technologies Results

At the first stage of the pedagogical experience, the subjects, knowledge, and skills of students in the experimental and control groups were formed at almost the same level (Table 1).

Table 1. Control results before the experimental test

Groups	Experimental group				Control group			
	very high	high	medium	low	very high	high	medium	low
Termiz State University	8	29	29	7	7	30	28	8
Shahrisabz State Pedagogical Institute	6	24	25	6	7	26	25	6
Uzbekistan State University of World Languages	7	22	24	5	6	23	22	6
Number of students	21	75	78	18	20	79	75	20
TOTAL:	192				194			

From the table above, it can be seen that before the experiment, the results of the experimental and control groups at the four levels are not significantly different.

Table 2 below presents the results of the students' (experimental and control groups) supervision conducted in the experimental test areas.

Table 2. The experience in higher education institutions is the final result of the test work

Name of higher education institutions	Degree	Experimental group		Control group	
		At the end of the experiment	%	At the end of the experiment	%
Termiz State University	Number of students	72 students		71 students	
	very high	16	22,2	8	11,3
	high	38	52,8	31	43,6
	medium	18	25,0	25	35,2
	low	0	0,0	7	9,9
Shahrisabz State Pedagogical Institute	Number of students	61 students		61 students	
	very high	14	22,9	7	11,5
	high	34	55,7	26	42,6
	medium	13	21,4	23	37,7
	low	0	0,0	5	8,2
Uzbekistan State University of World Languages	Number of students	57 students		56 students	
	very high	12	21,1	6	10,7
	high	32	56,1	24	42,9
	medium	13	22,8	21	37,5

	low	0	0,0	5	8,9
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Table 3. General results of higher education institutions

Name of higher education institutions	Indicator	Experimental group				Control group			
		Number of students at the beginning of the experiment	%	Number of students at the end of the experiment	%	Number of students at the beginning of the experiment	%	Number of students at the end of the experiment	%
General results for all higher education institutions	very high	21	10,9	42	22,1	20	10,3	21	13,3
	high	75	39,1	104	54,7	79	40,7	81	40,9
	medium	78	40,6	44	23,2	75	38,7	69	39,9
	low	18	9,4	0	0,0	20	10,3	17	5,9
TOTAL:	Number of students	192		190		194		188	

Table 4. General status of the obtained results

group / criteria	General results	Experimental group (N _T =190)			Control group (N _H =188)			
Scores of matching grades		5	4	3	5	4	3	2
Number of grades		42	104	44	21	81	69	17
Arithmetic average value of grades		$X_T^* = 3,99$			$X_H^* = 3,56$			
Efficiency coefficient		$\eta = 1,12$						
Selective variance		$S_T = 0,45$			$S_H = 0,65$			
Mean values are standard errors		$S_T = 0,67$			$S_H = 0,81$			
Confidence interval of X*		$3,89 < X_T^* < 4,09$			$3,44 < X_H^* < 3,68$			
Student statistics		$T = 6,14$						
degree of freedom		$K = 376$						
Criterion summary		Hypothesis H1 is accepted.						

Therefore, according to the mathematical calculation of the obtained results, it was found that the results obtained in the experimental group are reliable, that is, $T = 6.14 > 1.96$. Therefore, H₀ is rejected and hypothesis H₁ is accepted.

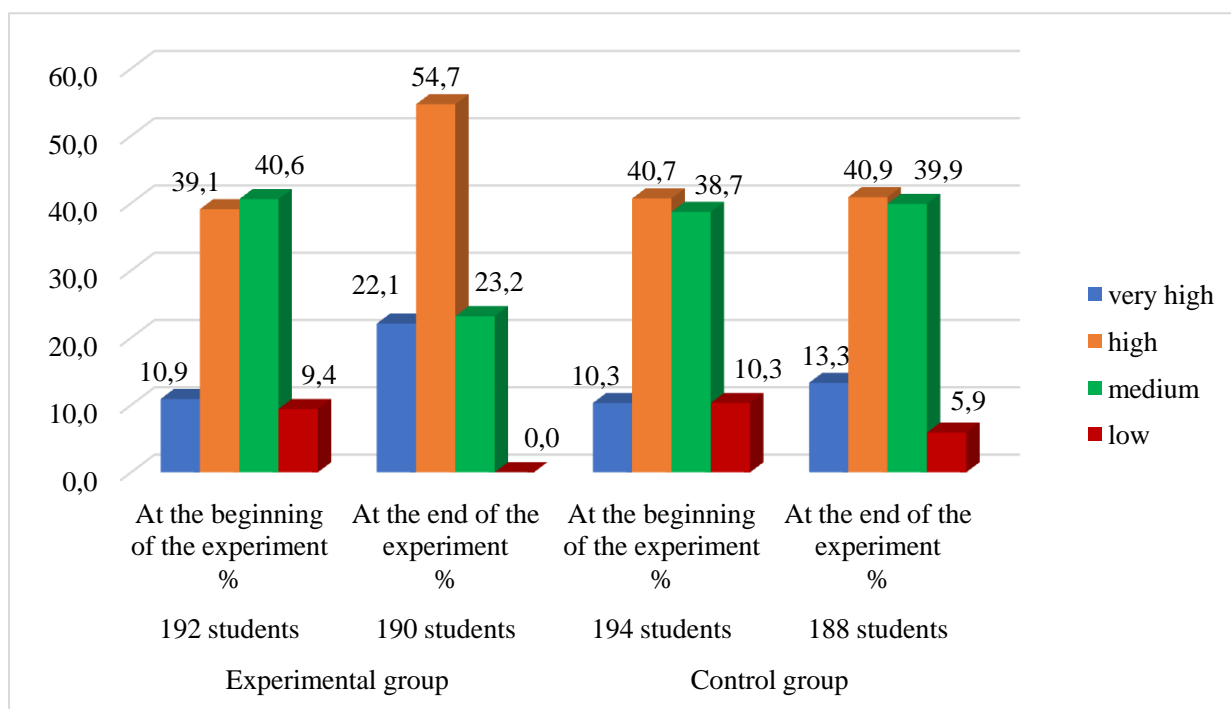


Figure 2. The experience conducted in all educational institutions is a generalization of the test results

Discussions

According to the results of the research, it is possible to draw the following conclusion: it is Based on the results of the research, it is concluded that using the appropriate tools and methods for digital technology in independent student assignments is crucial in higher education for teaching information technology sciences. To address students' shortcomings in using digital technologies for visual art tasks, a study guide and recommendations were developed.

In order to improve students' independent performance of tasks using modern technologies, various approaches were implemented, including tests, control works, creative assignments, application-based tasks, additional homework and independent work. Additionally, tasks such as preparing for independent reading of information technology science literature and its analysis were given to enhance students' understanding and control of digital technologies.

In the context of English language learning, research focused on developing students' skills in using digital technologies. The components of these skills were clarified, including digital linguistic, digital technical, digital multimedia, and telecommunication skills, all of which contribute to acquiring robust knowledge in various fields.

Moreover, the current situation and existing challenges regarding the usage of digital technologies by future English language teachers were examined, and their skills in using digital technologies were analyzed based on the principles of scientificity, activity and interactivity, systematicity and consistency, as well as the reinforcement of educational outcomes and demonstration.

Conclusions

The research identified the problem of future English language teachers' inadequate training in the use of digital technologies, as well as the lack of proper organizational and pedagogical conditions for their effective utilization. The need to create digital educational resources and develop a methodology for enhancing user skills was established by analyzing the relevance of research and identifying existing contradictions.

Based on this analysis, it is recommended to improve the curriculum and organize educational activities for future English language teachers in a way that integrates the

components of digital technology skills within the "Information Technologies in Education" subject. This approach will provide a convenient and effective means of developing the necessary skills.

Furthermore, addressing priority tasks such as the successful organization of independent education for future English language teachers within the higher education system should be based on the classification of digital technologies and their application in teaching methodologies.

References

1. Kuzennaya T.F. Formation of professional thinking among philology students: specialty 13.00.08 "Theory and Methods of Vocational Education": dissertation for the degree of candidate of pedagogical sciences / Tatyana Fedorovna Kuzennaya. – Kaliningrad, 2006. – 186 p.
2. Astakhova S.V. Formirovanie professionalnoy kompetentnosti studentov-philologov sredstami pedagogicheskogo upravleniya: spetsialnost 13.00.08 "Theory and methodology of professional obrazovanie»: dissertatsii na soiskanie uchenoy stepi kandida pedagogicheskikh nauk / Svetlana Vyacheslavovna Astakhova. - Samara, 2005. - 170 p.
3. Pakhnotskaya M.A. Formation of linguistic and cultural professional competence of philology students: specialty 13.00.08 "Theory and Methods of Vocational Education": dissertation for the academic degree of candidate of pedagogical sciences / Margarita Andreevna Pakhnotskaya. – Togliatti, 2006. – 167 p.
4. Kruglyakova G.V. Contents and technology of formation of professional information and communication competence of philology students: specialty 13.00.08 "Theory and Methods of Vocational Education": dissertation for the degree of candidate of pedagogical sciences / Galina Vladimirovna Kruglyakova. –Tolyatti, 2007. – 199 p.
5. Frolova E.V. Content, forms and implementation of computer support for the formation of linguistic competence of philology students: specialty 13.00.08 "Theory and Methods of Vocational Education": dissertations for the degree of candidate of pedagogical sciences / Elizaveta Vladimirovna Frolova. – Togliatti, 2008. – 206 p.
6. Riskulova K.D. System of formation of sociolinguistic competence of future English language teachers: Ped. science. name ... diss. Autoref. - Tashkent, 2017. - 10 p.
7. Mamarajabov M.E. Improvement of professional and pedagogical training of future teachers in the conditions of digitized education.: Ped. science. doc. ... autoref. – T.: 2022. – 78 p.
8. Mamatov D.N. Pedagogical design of corporate cooperation processes in education in the environment of digital technologies.: Ped. science. doc. ... autoref. – T.: 2022. – 72 p.