Learning english through YouTube as a self-development factor for future officers

Вивчення англійської мови засобами інформаційно-комунікаційних технологій як чинник саморозвитку майбутніх офіцерів

Written by:
Denys Kamentsev[59]
https://orcid.org/0000-0003-2115-6197
Oksana Havryshkiv[60]
https://orcid.org/0000-0002-1898-9684
Liliia Kukharska[61]
https://orcid.org/0000-0002-8957-6983
Olha Romashko[62]
https://orcid.org/0000-0001-7397-2626
Inesa Baybakova[63]
https://orcid.org/0000-0002-8157-3403

Abstract

The aim of the article was to assess the effectiveness of learning English through YouTube as a factor in improving the future officers' language skills. The study involved the following methods: survey, pedagogical experiment, Score-Rating System of Performance Control; Scale of Assessing the Need to Achieve the Goal by Yu. M. Orlov; Adapted Method of T. I. Ilina — Examining Motivation to Study in a higher educational institution (HEI); Diagnosis of the Level of Reflexivity Development by A. V. Karpov. The dynamics of change in the level of foreign language competence is very insignificant for students in the traditional form of education (control group), and it applies only to levels A1 (-8%) and A2 (+8%), that is, the lowest of the represented ones. Learning through the proposed model helps increase student involvement in foreign language learning, which is reflected in the increased number of completed assignments.

Анотація

Метою статті була оцінка ефективністі вивчення англійської мови через YouTube як чинника підвищення мовних навичок майбутніх офіцерів. У дослідженні були використані наступні методи: опитування, педагогічний експеримент, Бально-рейтингова система контролю успішності; Шкала оцінки необхідності досягнення мети Ю.В. М. Орлов; Адаптована методика Т. І. Ільїної — Вивчення мотивації до навчання у вищому навчальному закладі (ВНЗ); Діагностика рівня розвитку рефлексивності за А. В. Карповим. Динаміка зміни рівня іншомовної компетенції дуже незначна у студентів традиційної форми навчання (контрольна група) і стосується лише рівнів A1 (-8%) та A2 (+8%), тобто найнижчий із представлених. Навчання за запропонованою моделлю сприяє підвищенню залучення студентів до вивчення іноземної мови, що відображається у збільшенні кількості виконаних завдань. Зростає якість освіти, що

[59] Ph.D in History, Head of the Department of Foreign Languages and Military Translation, Hetman Petro Sahaidachny National Army Academy, Lviv, Ukraine.
[60] Lecturer of the Foreign Languages and Military Translation Department, Hetman Petro Sahaidachny National Army Academy, Lviv, Ukraine.
[61] PhD in Management, Associate Professor at the Department of Foreign Languages and Military Translation, Hetman Petro Sahaidachny National Army Academy, Lviv, Ukraine.
[62] Lecturer of the Foreign Languages and Military Translation Department, Hetman Petro Sahaidachny National Army Academy, Lviv, Ukraine.
[63] PhD in Philology, Associate Professor at the Foreign Languages Department, The Institute of Humanities and Social Work, Lviv Polytechnic National University, Lviv, Ukraine.

The quality of education is growing, which is reflected in the increased level of student performance.

відображається на підвищенні рівня успішності студентів.

Keywords: Foreign language competencies, learning English, training officers, YouTube in education, linguistic education.

Introduction

The informatization and globalization of society set new requirements for the educational process, and new approaches to learning appear. Mass informatization of society has made the Internet an important part of everyday life of most modern people. In a relatively short period of its existence, the Internet has been involved in changing all spheres of society, including education (Order № 466, 2013). The possibilities of using Internet resources to obtain new and improve existing knowledge are endless. Virtual social networks are not only a popular means of communication but also a unique resource for those who learn a foreign language. As one of the available ways to exchange information, social networks and hosting platforms are becoming an effective tool for acquiring foreign language competencies by future officers (Spiriakova, Tokmilenko & Balyuk, 2020).

From the research point of view, the video blogosphere is a relatively new social phenomenon. Still, it has particular prerequisites for theoretical justification, which follow from the provisions of the theory of structural functionalism. The video blogosphere has obvious boundaries in time and space as an element of social structure. As part of the global Internet, the video blogosphere demonstrates all the major subsystems of social structure (behavioural organism, cultural system, personality system, social system) (Maria et al., 2020).

Traditionally, insufficient time is allocated, and insufficient attention is paid to the study of Foreign Language in the military HEIs, because it is not specialized. The education system that existed recently contributed to the acquisition of knowledge, skills, and abilities by students, but this was not enough to form a fully developed personality of the future officer of the Armed Forces. There is a need for close cooperation between the domestic military and the world community due to the growing public interest in international military blocs. The state's desire to join the NATO military bloc necessitates the future officers' communication ability. In today's world of globalization, there is a growing need to connect with other cultures, and learning a foreign language has a special place. A foreign language is no longer an end in itself and can serve as a working language for seminars and lectures during the exchange of experience between domestic and foreign military (Marchenkov, 2021).

As a foreign language becomes a necessary tool for the daily activities of the military, modern students and graduates of specialized HEIs need to master all means of communication with foreign colleagues. This approach leads to a change in attitudes towards teaching foreign languages in non-linguistic faculties of military HEIs. It is necessary to optimize language education, taking into account new realities in the context of informatization and digitalization (Ministry of Education and Science of Ukraine, 2020).

YouTube is a video hosting company that provides users with video storage, delivery, and display services. Users can upload, view, rate, comment, add to favourites and share videos. Due to its simplicity and ease of use, YouTube has become the most popular video hosting and the second-largest site globally in terms of the number of visits. From a computer science standpoint, YouTube is nothing more than a database that allows video to be uploaded to the platform and viewed.

Using YouTube as an archiving platform entails certain media transformations, although some sceptics argue that "there will never be a time when everything is available (online)." Moreover, most archives are interested in receiving the money to preserve or restore old, unique products rather than in their promotion and free distribution (Olimova, 2020).

Therefore, YouTube is a kind of environment that archives and distributes audio-visual media. YouTube can and should be used as a lecture and practical material database, including on Foreign Language (Silveira & Reis, 2022).

Obviously, implementing two main functions — communicative and informational — YouTube presents students with a new format of social platform for the realization of their own creative and educational potential. Internet socialization is a new format of student integration into the globalized world, which was formed under the influence of two processes:

Global informatization of society, which entails a change in the process itself and the emergence of new channels and institutions of socialization;

Changing views on the formation of communicative competence of the future specialist, including in the military field (Sabiri, 2020).

The study aimed to prove the effectiveness of learning English through YouTube to improve the language skills of future officers. The aim involved the following research objectives:

Check the effectiveness of pedagogical conditions to increase the level of foreign language competencies.

Compare the effectiveness of information and communication and traditional technologies for learning a foreign language.

Literature review

Technological, organizational, and pedagogical aspects of e-learning described in Steiner and Mendelovitch (2017) are subject to standardization (IEEE Learning Object Metadata; ARIADNE, PROMETEUS; SCORM), formalized in computer programs for educational purposes (ePront, OpenElms, ILIAS Claroline LMS, OLAT, ATutor, Moodle, etc.). The analysis showed that research is directed toward increasing consistency, fundamentalism, and strengthening the applied significance of teaching social-humanitarian and general professional subjects. This is evidenced by the increased interest in the problem of improving organizational forms (Shinkevich et al., 2020), the implementation of didactic principles (Ryan et al., 2014), stimulating independent activity, and management of self-learning activity (Rosida, Muin & Sakka, 2021). Development of students' readiness for self-learning and its management, as well as the formation and development of the culture of independent activity (Kulieva et al., 2021); various aspects of independent activity (Asad et al., 2020); opportunities for autonomous activity in the development of personal components — as a means of forming subjectivity, self-knowledge, professional self-development (Aborode et al., 2020). Many studies point to the need for greater use of the latest communication technologies to learn a foreign language. Although the education digitalization process is constantly covering higher education institutions, the level of implementation of new technologies is still low. According to Umarova (2020), it is necessary to ensure the development of information and digital resources for learning a foreign language. Particular attention in the scientific literature is paid to the organization of the educational process during distance learning (Liutyi, 2021a, b).

Despite a comprehensive study of various aspects of self-learning a foreign language, innovative processes that are actively taking place at the present stage in HEIs are still insufficiently reflected in the process of its organization. Issues related to the modelling of self-learning activities of students in HEIs, including students who follow an individual plan, need to be addressed.

Uncertainty of the selected theoretical provisions causes several contradictions in the practice of higher military education:

- between the need of the military educational practice for the creation of resource materials for the organization of self-learning activities of students with the help of automated educational systems and the uncertainty of pedagogical conditions for their effective use;
- between the objective need for the introduction of information technology in the educational process and the insufficient development of theoretical and methodological aspects of their use in students' self-learning.

Methods

Design

The experiment aims to test the effectiveness of the introduction of English language learning in the educational process using YouTube. The selection and evaluation of the general conditions of the experiment are considered an integral part of its planning, namely — the means and places of implementation by students and teachers. Particular attention was paid to the evaluation and correct choice of comparable and variable experimental conditions. Equalization is performed in the control and experimental

groups to ensure the similarity and invariance of the conditions. In general, they include student composition, teacher's personality, educational material, and educational situation.

The study was conducted in several stages, as detailed in Table 1.

Table 1.
Stages of the study

Stage	Period	Description	Result
1 Preparation. Research of scientific literature. Selection of methods. Preliminary study. Development of experimental material.	June 2020	Analysis of scientific and methodological literature on the organization of learning English. Definition of the objectives and methods of research. Analysis of the current state and prospects for the development of informatization of educational processes. Development and substantiation of the structural and content model, software and methodological support, as well as pedagogical conditions for the organization of English learning with the help of YouTube.	Scientific and methodological literature was reviewed. The concept of scientific research is formulated, the objectives and methods of their fulfilment are defined. The possibilities of automated learning systems and distance learning systems, which are used in English language learning, were identified. The pedagogical conditions necessary for realization of pedagogical model are defined.
2. Main pedagogical experiment	September 2020 – June 2021	Approbation of pedagogical conditions. Testing.	A model of organizing English self-learning with the help of YouTube was introduced into the educational process.
3 Statistical data processing. Summarizing the results of the pedagogical experiment	September – December 2021	Data processing. Summarizing the results of the pedagogical experiment.	The results of experimental work were used to write the article.

Source: Authors

Participants

The general sample consisted of students of HEIs in Ukraine aged 17 to 26. The sample consisted of students of military HEIs who agreed to take part in a pedagogical experiment — a total of 150 respondents who formed an experimental group. Pedagogical conditions were applied to the experimental group. Namely, a programme for learning English via YouTube was proposed. The control group consisted of students of non-military HEIs who studied English by traditional methods. The control group involved 150 students. Students of the control group studied English by the method of blended learning.

Instruments

Google Forms were used for the survey. The data were entered and processed in Microsoft Excel and SPSS Statistics 18.0. All data are given in relative (% of the number of respondents) values. All instruments meet the criteria of validity, scientific, and verifiable results. The proposed test meets the criterion of validity in content because it fully covers the research subject. The

test also complies with the principle of convergent validation. Namely there is a relationship between test results and other study indicators. The test does not measure any trait that it should not measure and thus complies with divergent validation. Based on this, you can unambiguously ensure that the test meets the requirements of science and academic ethics.

Data collection

1. The study used an author's online questionnaire developed through Google Form (http://surl.li/azjiu). Such diagnostic pedagogical methods as Scale of Assessing the Need to Achieve the Goal by Yu. M. Orlov (Studwood, n.d.); Adapted Method of T. I. Ilina — Examining Motivation to Study in a higher educational institution (HEI) (Psitesterua, n.d.); Diagnosis of the Level of Reflexivity Development by A. V. Karpov (Psycabi, n.d.).
2. The pedagogical experiment is a method of complex scientific research, and the essence is to use a set of didactic research methods. The pedagogical experiment was conducted in stages, comparing the initial and final indicators of the

control group and the experimental group. The study involved summative and formative pedagogical experiments (Plomp 2020).

Score-Rating System of Performance Control was used to determine the level of cognitive component and its indicator "mastering the system of multilateral knowledge in the process of self-learning a foreign language". Learning a foreign language is based on extensive use of the YouTube hosting platform. The maximum points that a student can score per semester in the subject is 100% (100 conditional points). The maximum score obtained on the exam/test can be 30 conditional points (percent). The total score for the subject is translated into its national numerical equivalent and European Credit Transfer and Accumulation System (ECTS). Rating points scored by students are converted according to Table 2. The article uses reliable and proven research methods and data processing tools.

Table 2.
Scale of conversion of points into the national numerical equivalent, the international letter system

Sum of points for current control	Sum of points for intermediate examination	Sum of conditional points (percent)	Numerical equivalent	Grade	Level of development
68 – 70	29 – 30	97 – 100	5	Excellent	
66 – 67	27 – 28	93 – 96	5	Very well	High
56 – 65	21 – 26	77 – 92	4	Good	
45 – 55	18 – 20	63 – 76	3	Satisfactory	
35 – 44	15 – 17	50 – 62	3	Middling	Medium
20 – 34	12 – 14	31 – 49	2		
0 – 19	0 – 11	0 – 30	2	Unsatisfactory	Low

Source: Authors

Data analysis

Mann-Whitney U test. The Mann-Whitney test does not impose restrictions on the range of changes in the values of the characteristics in both samples, that is, the mutual placement of the studied samples does not matter.

$$U = W - \frac{1}{2} m\,(m + 1) = \sum_{i=1}^{n} \sum_{j=1}^{m} \delta_{ij}; \quad (1)$$

When applying the Mann-Whitney test, the sample sizes must meet the following requirements: $n_X \geq 3$ and $n_Y \geq 3$ or $n_X = 2$ i $n_Y \geq 5$. In this case, the first is the sample, which is more important according to preliminary estimates.

Ethical criteria

The research was conducted considering the requirements for academic integrity in scientific activity. The data from the research participants were obtained in the manner prescribed by the rules of scientific research work. Respondents were warned that the study results would be published as a scientific article. Respondents provided informed consent for the use of research results. Personal data of respondents remain known only to the author's team of researchers. All research methods are selected following the academic requirements of respect for the individual and prevention of discrimination on any grounds.

Results

In 2020, students of the control and experimental groups passed the input test in an exam format, which included 5 sections: reading, lexical and grammar test, listening, writing and speaking. The final testing in the format of the exam was conducted after the end of the 2020/21 academic year — in May 2021. The data were processed by mathematical methods. Not all data had a normal distribution, it was decided to process all data by estimating non-parametric odds according to the Mann-Whitney test. Sections such as writing and lexico-grammatical test were of interest for this study. Probability values with an explanation of the statistically significant difference and dynamics are presented in Table 3.

Table 3.

Dynamics of success in completing the assignments of sections "writing" and "lexico-grammatical test" for the period of experimental training

Section	Assignment		P-Value on the Mann-Whitney test at the beginning of the experiment	Statistically significant difference	P-Value on the Mann-Whitney test at the end of the experiment	Statistically significant difference	Dynamics
Writing	Multiple choice cloze	EG and CG	0.0379	Yes	0.7726	No	
	Open cloze	EG and CG	0.0217	No	0.5576	No	
	Word format transfion	EG and CG	0.4792	No	0.4803	No	
	Sentence transfion	EG and CG	0.9256	No	0.1241	No	
	Summary	EG and CG	0.1055	No	0.0214	Yes	++
	Essay	EG and CG	0.9276	No	0.0222	Yes	+++
TOTAL		EG and CG	0.4966	No	0.035	No	+

Source: Authors

The data analysis shows that according to the input test results, the students of the experimental groups coped with the multiple-choice assignment Use of English Multiple Choice better than the students of the control group. Students in traditional CG classes coped better with the assignment of filling in the blanks with the appropriate words Use of English Open Cloze than EG students.

The trend, however, changed during the final exam: EG students on showed better results in the assignments of Use of English Multiple Choice and Use of English Open Cloze compared to CG students. It can be noted that the data show changes in writing and speaking skills, that is, in assignments for abstracting and essay writing.

Besides, it is worth noting the tendency for a statistically significant difference in the overall score of EG students. Although the P-value in the Mann-Whitney test — 0.0835 — does not indicate a statistically significant difference, it is important to note that this value is close to the specified figure of 0.05 compared to the order of magnitude input test (0.4966), which indicates a trend of more successful learning of EG students.

The analysis of the change in the sum of points by sections is of great interest, when all types of assignments are combined. For example, the scores on four assignments — Multiple-choice cloze, Open cloze, Word formation and Sentence transformation — will be summed up for the "lexico-grammatical test" section. Next, the scores obtained by the students of the group in this section were added up, and the relative difference between the values obtained was analysed (Figures 1 and 2).
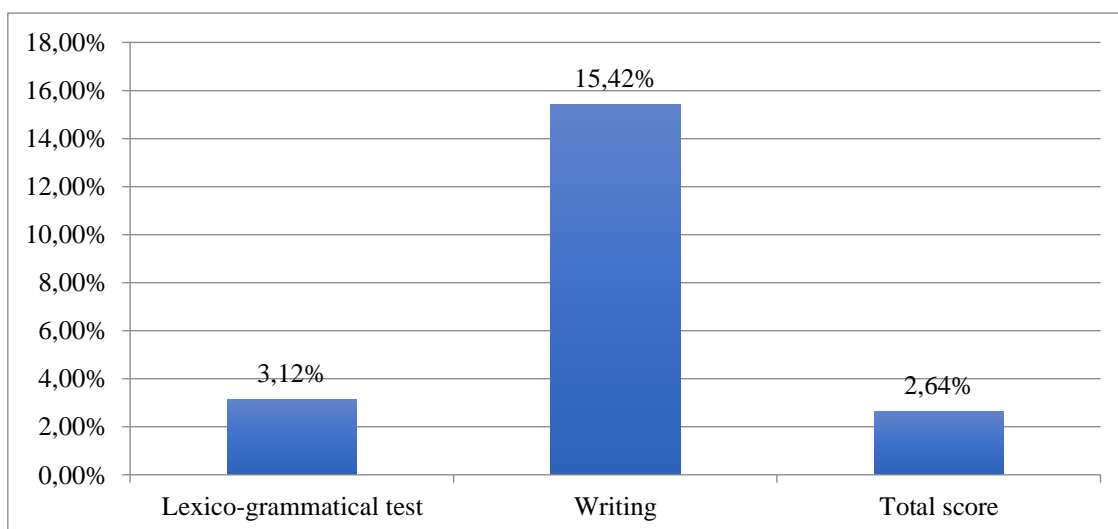
Figure 1. Comparison of the results of the input test and the final exam for students of the control group.
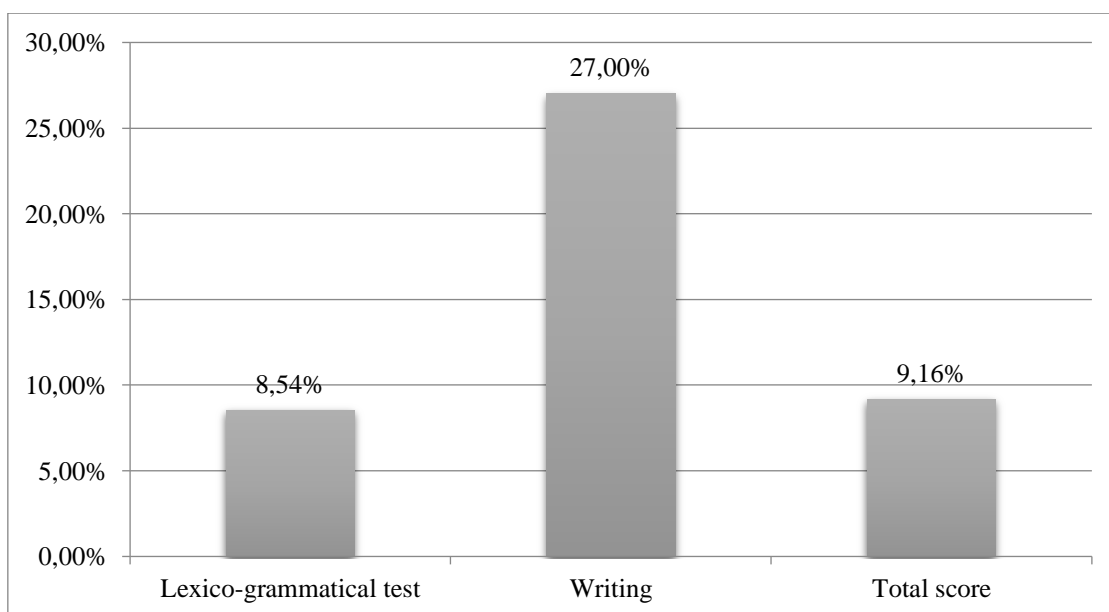Source: Authors

Figure 2. Comparison of the results of the input test and the final exam for students of the experimental group.
Source: Authors

The analysis of the diagrams shows how the total values on the sections "Lexico-grammatical test" and "Writing", including the Total score, have changed in all groups. Students were engaged in self-learning outside the classroom during the study and submitted the results to the teacher: the control group — on paper and the experimental groups — online. It is noted that the positive dynamics in all sections are observed in students studying through YouTube, while in the control group — only in the section "Lexico-grammatical test". This is due to the possibility of copying the answers of other control group students, who completed the assignment of

independent work on paper and submitted it in class.

The assignments were checked as follows: the student posts the answers on his/her personal page, the teacher checks the answers and selects the wrong ones, leaving comments on the type of a mistake, if necessary (indicating the area of error). Then the student can complete this assignment again and get extra points for corrected mistakes. If the student does not understand what exactly is wrong, he/she can ask questions. The combination of the ability to make adjustments to the work and the lack of opportunity to read other students' work explains

the achievement of the best results in the development of writing skills on closed pages. As for the dynamics of the overall score, all groups showed an improved effect.

If we compare the level of foreign language communicative competence in students when passing the input test in the format of the exam in 2020 and the level achieved after the course in May 2021, we see the following picture (Table 4).

Table 4.
Changes in the level of foreign language communicative competence of students during the experimental training from input control to final control

	Input control	Final control	Dynamics
EG	A1 – 10%	A1 – 0%	A1 – -10%
	A2 – 21%	A2 – 16%	A2 – -5%
	B1 – 53%	B1 – 31%	B1 – - 22%
	B2 – 16%	B2 – 52%	B2 – +37%
CG	A1 – 8%	A1 – 0%	A1 – -8%
	A2 – 25%	A2 – 33%	A2 – +8%
	B1 – 42%	B1 – 42%	B1 – -
	B2 – 25%	B2 – 25%	B2 – -

Source: Authors

The dynamics in CG students of a traditional form of education are very insignificant, and it concerns only levels A1 (-8%) and A2 (+8%), which is the lowest of the represented ones. Changes in levels B1 and B2 were not recorded. The most favourable picture is observed in the experimental group: the share of students with initial levels A1, A2 and B1 decreased (-10%, - 5% and -22%, respectively), and the share of students with the highest of the represented levels — B2 — showed a significant increase of 37%. We can say that students who used YouTube achieved the greatest success.

Discussions

Analysis of the exam results showed that students of the experimental group did no worse and, in some respects, even better than students in the traditional form of education. When comparing scores for assignments in different sections, students who studied the use of information and communication technologies showed an increase in all indicators, including the Total score. Ifeakor (2021), Mazurenko (2021), Poddubnaya et al., (2020) noted high rates of students studying English through information and communication technologies. At the same time, students with traditional forms of education showed negative dynamics in some sections. According to studies by Hodges et al. (2020), Lemeshchenko-Lagoda, Kryvonos and Kolodii (2020), acquiring a high level of communicative competence is not possible in today's world without the introduction of innovations. The study showed that the use of such a popular platform as YouTube could increase the English

language level of future officers of the Armed Forces.

YouTube has been found to be a didactically justified tool for creating an information and educational environment in distance learning. The proposed model uses YouTube to post learning material, organize various types of active assignments, implement collaborative learning, and provide online feedback via interactive chat. The importance of interactivity in foreign language learning is noted by Aripova (2021). The researcher notes that active and interactive methods allow the development of future specialists' communicative competencies. The optimal number of participants for the organization of work is determined. The efficiency of pair interaction is proved. Learning foreign language writing and speaking activities within the proposed model helps to increase students' motivation by creating a virtual learning space, implementing of interactive group assignments, implementation of mutual evaluation technology, transparency of evaluation procedures, access to quality electronic specialized educational resources, and the possibility of feedback from the teacher and other students. Studies by Chernova et al., (2021), Chisango et al., (2020), Czerniewicz (2020) etc. note that the traditional form of learning remains indispensable. According to researchers, comparisons of traditional and innovative forms give approximately the same results.

The theoretical significance of the research results is that they expand and deepen knowledge

about the nature of the use of YouTube in foreign language learning, its theoretical and methodological principles, and organization through the use of computer technology. The study's practical significance is because today, the Internet has entered all spheres of human activity. This is the largest source of information. With the help of the Internet, you can use all sorts of educational and methodological information when learning a foreign language, including video content. Every day on the Internet you can meet new phenomena, to understand this you need to have a basic knowledge of English. More and more people want to participate in intercultural communication via the Internet or live communication. Learning a foreign language is designed to form a person capable of it. The purpose of learning a foreign language is the formation of communicative competence. Communicative competence includes not only linguistic but also socio-cultural competence, as without knowledge of the cultural background it is impossible to form communicative competence even within limited limits. This study provides an understanding of the importance of using YouTube in foreign language learning in freelance education.

The practical significance of the model proposed in the study lies in the analysis of the experience of using computer technologies to improve the training of military personnel. A significant advantage of the article is comparing the use of YouTube in foreign language learning by students of various fields of study. This will make it possible to adapt the methodological basis of the article for conducting similar studies among students of not only military specialties. The practical significance of the research was also achieved through developing a methodological base for researching the effectiveness of computer technologies in foreign language learning. The practical results of the study can improve the methodological and didactic basis of English language teaching in higher education institutions.

The main limitation is the inability to cover a large number of respondents. This limitation arises against the background of the specifics of the mode of operation of the military HEI. Therefore, it was possible to reach only some respondents, making it possible to unequivocally assert the validity and consistency of the data obtained. Quarantine restrictions related to the COVID-19 pandemic should also be mentioned. However, despite all the difficulties, it is possible to assert the representativeness of the obtained data.

Conclusions

The use of YouTube video hosting has been suggested as an effective tool for foreign language learning for future Armed Forces officers. The research results showed that the dynamics of level change in CG students is very insignificant. In particular, it is observed at levels A1 (-8%) and A2 (+ 8%), which is the lowest of the represented ones. When processing the study results, changes in B1 and B2 in the CG were not recorded. The most favourable picture is observed in the experimental group: the share of students with initial levels A1, A2 and B1 decreased (-10%, -5% and -22%, respectively), and the share of students with the highest of the represented levels — B2 — showed a significant increase of 37%. The research can be helpful to all interested organizations and individuals whose activities are related to increasing the level of foreign language competence of future specialists. Of course, this study does not cover all aspects of this problem. Further research may deal with the formation of the students' readiness to work independently with the help of video hosting.

Bibliographic references

Aborode, A., Anifowoshe, O., Ayodele, I. T., Iretiayo, A. R., & David, O. O. (2020). Impact of COVID-19 on education in Sub-Saharan Africa. Preprints, 2020, Art. 2020070027. https://doi.org/10.20944/preprints202007.0027.v1

Aripova, N. A. (2021). Preparing students for independent educational activities in credit-modular system. Journal of Hunan University (Natural Sciences), 48(11), 1064-1061. Retrieved from https://johuns.net/index.php/publishing/185.pdf

Asad, M. M., Hussain, N., Wadho, M., Khand, Z. H., & Churi, P. P. (2020). Integration of e-learning technologies for interactive teaching and learning process: An empirical study on higher education institutes of Pakistan. Journal of Applied Research in Higher Education, 13(3), 649-663. https://doi.org/10.1108/JARHE-04-2020-0103

Chernova, O. E., Litvinov, A. V., Gorbunova, L. N., Telezhko, I. V., & Nizamutdinova, S. M. (2021). Development of sportsman students' autonomy in the educational environment of electronic information and foreign language teachers' readiness to this process. Journal of Human

Sport and Exercise, 16(3), 1227-1243 https://doi.org/10.14198/jhse.2021.16.Proc3.39

Chisango, G., Marongwe, N., Mtsi, N., & Matyedi, T. E. (2020). Teachers' perceptions of adopting information and communication technologies in teaching and learning at rural secondary schools in eastern cape, South Africa. Africa Education Review, 17(2), 1-19. https://doi.org/10.1080/18146627.2018.1491317

Czerniewicz, L. (2020, March 15). What are learnt from 'going online' during university shutdown in South Africa. Philinedtech. Retrieved from https://philonedtech.com/what-we-learnt-from-going-online-during-university-shutdowns-in-south-africa/

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. Educause. Retrieved from https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Ifeakor, J. U. (2021). Effect of using information and communications technology (ICT) in teaching and learning English language in tertiary institutions in Nigeria during covid-19 pandemic era. Journal of Educational Research & Development, 4(2), 130-143. Retrieved from http://educationalresearchdevelopmentjournal.com/index.php/JERD/article/view/46

Kulieva, S. H., Mukhidova, O. N., Kulieva, D. R., Rakhmonova, G. S., & Razhabova, I. H. (2021). The role of modern pedagogical technologies in the formation of students' communicative competence. Religación, 4, 261-265. Retrieved from https://www.neliti.com/publications/331688/the-role-of-modern-pedagogical-technologies-in-the-formation-of-students-communi

Lemeshchenko-Lagoda, V., Kryvonos, I., & Kolodii, O. (2020). Integration of information and communication technologies into the process of learning the course of English for specific purposes as one of the requirements for sustainable future development. E3S Web of Conferences, 166, Art. 10005. https://doi.org/10.1051/e3sconf/202016610005

Liutyi, V. (2021a). Distance learning resources for developing officers' language competencies. Young Scientist, 5(93),

212-221. https://doi.org/10.32839/2304-5809/2021-5-93-41

Liutyi, V. (2021b). Pedagogical conditions of language competence development in officers of military units of the National Guard of Ukraine in distance. Young Scientist, 6(94), 168-178. https://doi.org/10.32839/2304-5809/2021-6-94-34

Marchenkov, S. M. (2021). Formation of information-analytical competence of future officers in the process of professional training. (Doctoral dissertation) Zhytomyr Ivan Franko State University, Zhytomyr, Ukraine. Retrieved from http://eprints.zu.edu.ua/32576/1/dys-Marchenkov.pdf

Maria, L., Kiriaki, T., Christos, I., Aikaterini, F., & Lambrini, K. (2020). The use of new information and communication technologies in nursing practice. EAS Journal of Nursing and Midwifery, 2(1), 40-44. https://doi.org/10.36349/easjnm.2020.v02i01.07

Mazurenko, I. (2021). Training of future aircraft maintenance engineers for improving professional communication. Scientific Journal of Polonia University, 46(3), 64-72. https://doi.org/10.23856/4609

Ministry of Education and Science of Ukraine. (2020). The letter of the Ministry of Education and Science of Ukraine from November 2, 2020, № 1/9-609 on organizing distance learning. Retrieved from https://mon.gov.ua/ua/npa/shodo-organizaciyi-distancijnogo-navchannya

Nekit, K., Ulianova, H., & Kolodi, D. (2019). Website as an object of legal protection by Ukrainian legislation. Amazonia Investiga, 8(21), 222-230. Retrieved from https://amazoniainvestiga.info/index.php/amazonia/article/view/97

Olimova, D. Z. (2020). The effectiveness of implementation of ICT in learning process. European Scholar Journal, 1(4), 9-11. Retrieved from https://media.neliti.com/media/publications/340735-the-effectiveness-of-implementation-of-i-cc4e7db6.pdf

Order № 466. "On the approval of the 2013 regulation on distance learning". Ministry of Education and Science of Ukraine. Last modified on April 25, 2013. Retrieved from https://zakon.rada.gov.ua/laws/show/z0703-13#Text

Plomp, V. R. (2020). Estimating links between latent variables using structural equation modeling in R. (Bachelor thesis) Delft University of Technology, Delft, The

Netherlands. Retrieved from http://resolver.tudelft.nl/uuid:a3944cfc-a831-4d6c-ad0a-04605a0f1b91

Poddubnaya, T., Zadneprovskaya, E., Dzhum, T., & Khatit, F. (2020). Using the electronic information and educational environment of the university in the training of tourism industry workers. Amazonia Investiga, 9(28), 249-259. https://doi.org/10.34069/AI/2020.28.04.28

Psitesterua. (n.d.). Methodology "Motivation of higher education" / TI Ilyina /. psychological tests. Retrieved from https://psitesterua.ucoz.ru/publ/motivacija/navchalna_motivacija/metodika_quot_motivacija_navchannja_u_vuzi_quot_t_i_iljina/25-1-0-40

Psycabi. (n.d.). Reflection test. Methodology for diagnosing the level of development of reflexivity, the questionnaire of Karpov A. V. Retrieved from https://psycabi.net/testy/517-test-refleksii-metodika-diagnostiki-urovnya-razvitiya-refleksivnosti-oprosnik-karpova-a-v

Rosida, A., Muin, S. A., & Sakka, W. (2021). An internal analysis of e-learning implementation readiness: present evaluation and future planning. Utamax: Journal of Ultimate Research and Trends in Education, 3(1), 1-8. https://doi.org/10.31849/utamax.v3i1.5715

Ryan, S., Scott, B., Freeman, H. & Patel, D. (2014). The virtual university: the internet and resource based learning. London: Kogan Page. https://doi.org/10.4324/9781315042022

Sabiri, K. A. (2020). ICT in EFL teaching and learning: a systematic literature review. Contemporary Educational Technology, 11(2), 177-195. https://doi.org/10.30935/cet.665350

Shinkevich, M. V., Mashkin, N. A., Ishmuradova, I. I., Kolosova, V. V., & Popova, O. V. (2020). Management of sustainable consumption of energy resources in the conditions of digital transformation of the industrial complex. International Journal of Energy Economics and Policy, 10(5), 454-460. https://doi.org/10.32479/ijeep.10202

Silveira, C., & Reis, L. (2022). Sustainability in information and communication technologies. In M. Khosrow-Pour (Ed.), Research anthology on measuring and achieving sustainable development goals (pp. 771-792). Hershey, PA: IGI Global. Retrieved from https://www.igi-global.com/chapter/sustainability-in-information-and-communication-technologies/290942

Spiriakova, S. V., Tokmilenko, O. V., & Balyuk, V. P. (2020). Time trials: from concept to actual practice of distance learning: a bibliographic index (2012-2020). Poltava: Poltava V. G. Korolenko National Pedagogical University. Retrieved from http://dspace.pnpu.edu.ua/handle/123456789/15704

Steiner, D., & Mendelovitch, M. (2017). "I'm the same teacher": The attitudes of science and computer literacy teachers regarding integrating ICT in instruction to advance meaningful learning. Eurasia Journal of Mathematics, Science and Technology Education, 13(5), 1259-1282. https://doi.org/10.12973/eurasia.2017.00670a

Studwood. (n.d.). Methodology "The need to achieve the goal" (Yu. M. Orlov). Retrieved from https://studwood.net/2550264/psihologiya/metodika_potreba_dosyagnenni_meti_yumorlov

Umarova, F. A. (2020). Advantages of using electronic learning resources in the educational process. European Journal of Research and Reflection in Educational Sciences, 8(8), 31-36. Retrieved from https://www.idpublications.org/wp-content/uploads/2020/07/Full-Paper-ADVANTAGES-OF-USING-ELECTRONIC-LEARNING-RESOURCES-IN-THE-EDUCATIONAL-PROCESS.pdf