

ICEST 2021**II International Conference on Economic and Social Trends for Sustainability of Modern Society****TEACHING A FOREIGN LANGUAGE IN MASTER'S PROGRAM:
DISTANCE EDUCATION**

O. E. Iatsevich (a), S. A. Kovalevskaya (b)*, V. V. Iudashkina (c), I. I. Storozhev (d),
Yu. N. Tenikov (e)

*Corresponding author

(a) Industrial University of Tyumen, Tyumen, Russia, safronova@rambler.ru

(b) Industrial University of Tyumen, ul. Volodarskogo, 38, Tyumen, Russia

(c) Industrial University of Tyumen, Tyumen, Russia, brentano@yandex.ru

(d) Ural State University of Railway Transport, Tyumen, Russia, sii-81.20.10@yandex.ru

(e) Ural State University of Railway Transport, Tyumen, Russia, YTenikov@usurt.ru

Abstract

The authors rely on their own experience of teaching a foreign language in a distance educational system to IT students at the Industrial University of Tyumen. Such experience is associated with a number of difficulties: the heterogeneity of students' knowledge, a sufficiently small number of classroom hours, and the inability to obtain one-to-one counseling; the choice of adequate educational platforms and applications. A foreign language teacher has to competently and skillfully plan, organize, monitor and objectively evaluate the work of students. The distance learning process involves the use of various additional features of the Internet, online platforms and applications. That allows to search for information on the network; to engage a dialogue with students using corporate email; to plan and conduct teleconferences and webinars. All these activities have positive affect on the students' interest to the subject "Business foreign language in the professional sphere". The authors use the educational process support system "Educon V 2:0" to manage the self-education activities, to check and choose tools for monitoring achievements, to ensure their fair assessment. The survey conducted by the authors in student groups revealed that graduates are aimed at acquiring knowledge in a non-core discipline such as foreign language, which will present them as competitive employees of leading firms not only in the domestic labor market, but also in foreign countries.

2357-1330 © 2021 Published by European Publisher.

Keywords: Distance education, teaching a foreign language, information technologies



This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 Unported License, permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The current socio-economic situation makes special requirements for graduates of higher education institutions. These requirements are formalized by state educational standards and concretized by the demands of potential employers (Glotova, 2014). Whereas future employment for graduates plays a key role in increasing the prestige of higher professional education and maintains self-motivation for students.

Distance learning is one of the most progressive areas of the education, based on the use of personal computers, tablets, smart phones and electronic textbooks, requiring only access to the Internet.

2. Problem Statement

The problem of distance education is not new for domestic and foreign studies. The issues concerning this type of learning are covered in Russian research and methodological journals "Open and Distance Education" (Kardashova, 2020), "Distance Education" (Harrison et al., 2018).

Foreign colleagues publish their research results in the following journals: "American Journal of Distance Education", "Journal of Library & Information Services in Distance Learning", "Interactive Learning Environments, Journal of Research on Computing in Education", and others since 1980s. For example, Al-Jaber and Al-Ghamdi (2020) analyzed the influence of Covid-19 on the digital leaning in Qatar University. The authors evaluated that experience as positive, but they pointed out such problems as the lack of computers and fully paid Internet. Iivari et al. (2020) carried out the research of digital learning transformation caused by pandemic in Finland and India. They stated that future society will be more digital. Furthermore, the teachers and students have to be more encouraged of digital transformation in education. According to the review "Multiscreen to screen webinar for education beyond border: A review" of Prasetyono and Christian (2020) using videoconferencing apps is new normal for scientific meetings and webinars. However, the situation caused by coronavirus infection make us look at the process of distance learning format from a completely different side.

3. Research Questions

It is necessary to answer the following questions:

- What digital applications can be used for teaching a foreign language to IT masters students?
- What are advantages and disadvantages of analyzed applications?
- What are positive and negative effects of e-learning?
- What language skills can be improved by digital application?

4. Purpose of the Study

The main purpose of the article is to study online platforms and applications for teaching a foreign language to IT masters students. The authors include analyzed IT technologies to develop and improve language skills at teaching "Business foreign language in the professional sphere" course.

5. Research Methods

The authors relied on general scientific and special scientific methods, such as: observation, questioning, educational experiment, generalization and analysis.

The students' survey is carried out, covering 50 people of IT specialties. The survey's purpose is to determine the main activities used in the authors' work. As well as marking insufficient forms of activity and to identify the most effective forms according to students, which are necessary in their future profession.

6. Findings

The process of a foreign language learning is aimed at the formation of general cultural competencies. According to Elashkina (2006) the following competencies and skills are improved:

- communicative skills such as reading, listening, speaking and writing, providing interpersonal and intercultural interaction;
- tolerance of social and cultural differences;
- intention for self-organization, self-education and self-analysis;
- reflection.

Teaching IT masters students in the distance learning format, the authors adapt the experience from offline format to online. The authors use various auxiliary online platforms and applications. Which are able to form a number of competencies: reading, speaking, listening, writing. In the reality of distance learning the authors faced a number of challenges. They not only did the evaluation and revision of foreign language programs but they also have to incorporate online technology, which is dictated by the current worldwide situation.

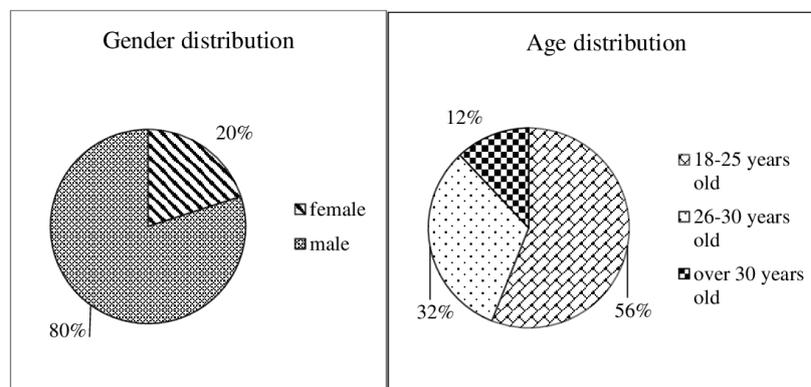


Figure 1. Age and gender distribution

At the first lesson the authors generally conduct a questionnaire survey of students. This is being done in order to determine students' expectations from the foreign language course and to find out what tasks they set for themselves. After the questionnaire the authors adjust the tasks and topics complexity.

The authors interviewed 50 first-year masters students of IT specialties.

Due to the fact that IT specialties are technical, most of the respondents are male, aged 18 to 30 years old.

The pie chart (Figure 1) plainly indicates that 45 of respondents are employed, 35 work in their specialty. All the respondents already know what skills and abilities they need and where they have lack of skills.

The survey shows that the main directions of English language course are reading and writing (Figure 2).

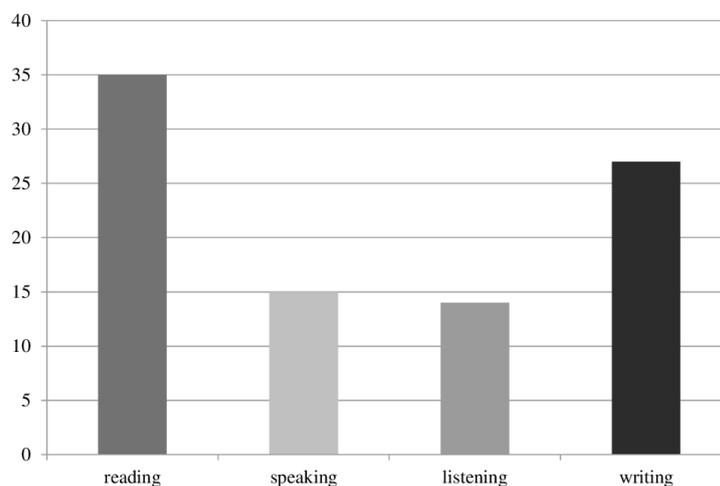


Figure 2. Types of activities used in practical foreign language classes at TIU

The survey shows the lack of creative tasks aimed at the ability to conduct a business dialogue properly, to write business correspondence correctly, and to use the scientific platforms such as the Web of Science and the Scopus.

In the course "Business foreign language in the professional sphere" students are introduced to the topics related directly to their future profession. Topics focus on the developing of communicative skills and competencies. However, the rapid departure to distance learning format has put teachers in front of the choice of available online resources. The use of such online resources would be appropriate and correspond to the goals of training. The material and technical base is also available to all participants in the learning process.

The introduction of online platforms is preceded by their primary analysis is presented in the Table 1.

The analysis of various online platforms (Corporate English, 2021; Easy Way to Technical Writing, 2021; EnglishLessons4U, 2021; Learn new skills online with top educators, 2020; Puzzle English, 2020; Teaching Writing Skills, 2021;) indicates that all platforms require registration, interesting and relevant

courses are very often monetized, while not all of them meet the requirements of a higher education institution. The offered courses are designed for general language learning and do not cover professional academic writing.

Table 1. Analysis of the educational platforms use for the linguistic competencies' formation

Educational platforms	Requirements	Types of competency	Types of assignment
Futurelearn	Free, registration required	Linguistic competence Pragmatic competence	Tests, videos
Puzzle-english	Free, registration required	Sociocultural competence	Books, games, interactive exercises, videos, word training
Skyeng	Free, registration required		interactive exercises, tests, video tutorials, possibility to determine your language level, videos with subtitles
Stepic	Some courses are free, fee-based courses, registration required		interactive exercises, video tutorials, tests
MOOC.org	Fee-based courses, need registration		interactive exercises, speaking clubs, tests, video tutorials, electronic textbooks
YouTube channels	Free		Videos

The authors also analyze applications for video conferencing. The digitalization involves primarily the use of mobile devices (tablet and smartphone), without reference to their permanent place of residence, since most of the masters' students work on a shift basis and do not have their own desktop computer. A summary analysis of the applications is shown in the Table 2 and the Table 3.

Table 2. E-learning applications' analysis

Programs/ applications	Advantages	Disadvantages
Skype	<ul style="list-style-type: none"> - easy to use; - up to 50 participants; - there is a group chat that saves the history of messages; - high security - all data is automatically encrypted; - free. - advanced settings; 	<ul style="list-style-type: none"> - demanding to internet speed; - no possibility to customize for yourself; - registration necessity. - no possibility to send heavy files (no more than 8MB).
Discord	<ul style="list-style-type: none"> - activates the microphone by voice or pressure; - the volume and mute can be adjusted, activate echo and noise cancellation. - convenient organization of conference participants on the screen; - individual applications can be demonstrated; - activation of a virtual whiteboard; 	<ul style="list-style-type: none"> - a time limit of 40 minutes in the free version.
Zoom	<ul style="list-style-type: none"> - for connection to the broadcast, it is enough to send a link to participants with a mailing list; - conference up to 100 people, 40 minutes for free; - Zoom-rooms; - the virtual whiteboard can be activated, where the teacher can write or draw schemes; 	

	- demonstration of a particular area or application, rather than the entire screen, is possible;	
	- service provides the ability to draw and highlight parts of the text on top of the screen demonstration. This tool is available to the creator of the conference as well as to conference participants;	
	- give the opportunity to open textbooks and make note.	
	- activation of a virtual whiteboard;	- confusing interface
	- conference can join up to 250 people;	
Microsoft Teams	- integration of the Microsoft's services: Office, Powerpoint, Excel;	
	- possibility of formatting, changing fonts and building tables in a chat;	
	- possibility to configure interaction of participants.	
Facebook / Vkontakte	- broadcasts take place in a closed group with students;	- much distracting information;
	- all communication about the course and the exchange of materials can be organized in the same group.	- registration is required.
	- conducting the broadcast from a closed account;	- registration is required;
Instagram	- when one person speaks, the other participants could not interrupt him/her;	- much distracting information;
	- the number of participants is not limited;	- no screen demonstration.
	- free of charge.	

Table 3. Comparative table of online services possibilities

	Skype	Discord	Zoom	Microsoft Teams	Facebook/ Vkontakte / Instagram
Number of participants	Up to 50	Up to 50	Up to 50	Up to 250	Not limited
Virtual whiteboard	No	No	Yes	Yes	No
Walkie talkie mode	No	Yes	No	No	No
Time limit	No	No	40 min.	No	No
Form of organization	Chat	Channels	Channels	Channels	Social network registration

To develop speaking skills the authors most often use the ZOOM application, which allows video conferencing. The presence of a virtual whiteboard makes it possible to clearly explain the grammar rules, read texts and watch videos.

The only disadvantage of ZOOM's free version is the time limit for 40 minutes, after that you need to restart it.

In the Table 4 "Using online technologies to form communicative skills" the authors systematize the Internet resources and Internet applications that they use in their distance teaching to build such skills as reading, speaking, listening and writing.

The authors identify the advantages and disadvantages of use of studied applications.

Table 4. Using online technologies to form communicative skills

Skills	Online technologies	Disadvantages
speaking	ZOOM	Unstable Internet, time limits, requires additional technical equipment for older models of computers (webcam, microphone, headphones)
reading	Online books	Reading aloud skills are not practiced
listening	YouTube	Unstable Internet, lack of professional videos
writing	Moodle	There is no opportunity to discuss all errors, and give feedback to students.

The authors also systematize different online technologies and introduce them into the practice of teaching various topics (Table 5).

Table 5. Internet platforms implemented at the lessons

Topics of the lessons	Applications/platforms	How to use
IT technology in our life	ZOOM, Animoto, Canva	Presentation
IT jobs	ZOOM MOODLE	Role play “To choose the right candidate for the position”. “Job interview”
Hardware/Software	ZOOM, power point, Canva	Role play “You are offering specialized software for some organization Present this software. Say about its main features, capabilities and advantages”
Programming languages	Zoom, discord, power point	Role play “Scientific Conference: Programming languages”.
Internet/E-mail	MOODLE	Write an essay “Your favourite searching engine”
Cloud computing	MOODLE	Write an essay “Future of cloud computing”
Net/Applications	Zoom, discord, power point, Canva	Create and present your own application/idea of application. Presentation. Video conference.
Internet security	MOODLE	Write a letter “Giving advice about Internet security”

Distance education is characterized by a significant share of self-sufficiency in the educational process. That makes it necessary to activate and maintain a stable cognitive self-motivation. Teaching at the technical university, the authors have to face some difficulties such as absence of stable Internet, a web camera and IT skills.

These factors determine the selection of the most adequate and effective methods and techniques used in the distance education. It should meet the following requirements: activation of self-sufficiency work, motivation to study and career guidance. The content of authentic resources on a particular specialty contributes to the expansion of knowledge in the student’s profession (acquaintance with innovations abroad), general cultural competence improvement (development of erudition and business communication) (Glotova, 2014).

The organization of independent work should take into account students' learning characteristics (flexible studying hours, the pace of learning a foreign language).

Therefore, special attention is paid to activating professional vocabulary (Speranskaya et al., 2018) and the ability to use technical online dictionaries, such as Multitran. The authors recommend using online dictionaries by studying professional terminology. The terminology system should be based on the following criteria (Speranskaya et al., 2018):

- the ability to relate the lexical determinant with a particular scientific, technical, sectoral, professional or other concept;
- concept as a part of the meta-terminology system;
- the definition of a term not only in words, but also in the form of a symbol, formula, figures or even an abbreviation.

7. Conclusion

For engineering students, foreign language is primarily an applied discipline, which helps to transform, store, accumulate and use the acquired knowledge regardless of the learning format. After analyzing different digital applications, the authors suggested necessity of the usage for improving professional language skills.

Distance education in a technical university has both positive and negative features not only within a single discipline, but in general regarding the educational process. The authors point out the factors that attract a large number of students to the distance form of learning can be summarized as the following points:

“Positive features of distance education”:

- fast and direct interaction within the educational space;
- shy students adapt more quickly and take part in the work;
- individual progress is better monitored;
- digital learning offers so many different uses, so learning content is not limited to a single subject;
- interactive learning experience is designed to improve motivation;
- the curriculum is much more focused on the students' life reality, as the Internet can not be away from everyday life;
- the opportunity to participate as an invited participant in conferences in other cities and countries;
- attending lectures by leading scientists;
- discovering/opening previously paid resources during a pandemic.

“Negative features of distance education”:

- learning how to work with digital media requires a lot of time;
- the lack of IT skills by teachers, so training is required;
- technical failures affect smooth learning;
- digital equipment and software cost a lot;
- deterioration of handwriting skills due to keyboarding typing;
- language is no longer required to participate in learning, so communication skills may diminish;
- frequent usage of digital content can lead to addiction problems.

It can be logically concluded that the distance education encountered in the spring of 2020 make teachers quickly navigate a variety of educational websites and applications that would keep students motivated even during online learning. The increased percentage of independent work during the pandemic is compensated by creative assignments and feedbacks that teachers received from students, adjusting the learning process.

References

- Al-Jaber, M. A., & Al-Ghamdi, S. G. (2020). Effect of virtual learning on delivering the education as part of the sustainable development goals in Qatar. *Energy Reports*, 6(8), 371-375. <https://doi.org/10.1016/j.egy.2020.11.174>
- Corporate English. (2021, February 12). *MOOC*. <https://mooc.ru/courses/corporat-englishdom>
- Easy Way to Technical Writing. (2021, March 23). *Stepik*. <https://stepik.org/lesson/32785/step/4?unit=12606>
- Elashkina, N. V. (2006). Formation of educational competence in the conditions of distance learning of students in foreign language communication: the initial stage of a language university [Doctoral dissertation, The University of Irkutsk]. *The Russian State Library (RSL)*. <https://dlib.rsl.ru/viewer/01003278030#?page=1>
- EnglishLessons4U. (2021, March 21). *Youtube*. https://www.youtube.com/channel/UC4cmBAit8i_NJZE8qK8sfpA
- Glotova, E. E. (2014). Employers' requirements for university graduates: a competence-based approach. *ChiO*, 4(41). 185-187. <https://cyberleninka.ru/article/n/trebovaniya-rabotodateley-k-vypusknikam-vuzov-kompetentnostnyy-podhod>
- Harrison, R. A., Harrison, A., Robinson, C., & Rawlings, B. (2018). The experience of international postgraduate students on a distance-learning programme. *Distance Education*, 39(4), 480-494.
- Iivari, N., Sharma, S., & Ventä-Olkkonen, L. (2020). Digital transformation of everyday life – How COVID-19 pandemic transformed the basic education of the young generation and why information management research should care? *International Journal of Information Management*, 55, 1-6. <https://doi.org/10.1016/j.ijinfomgt.2020.102183>
- Kardashova, G. D. (2020). The future begins now: how the learning methodology is developing during the pandemic period. *Open and distance education*, 2(78), 30-37.
- Learn new skills online with top educators. (2020, September 3). *FutureLearn*. <https://www.futurelearn.com/>
- Prasetyono, T. O. H., & Christian, A. (2020). Multiscreen to screen webinar for education beyond border: Review. *Annals of Medicine and Surgery*, 59, 237-241. <https://doi.org/10.1016/j.amsu.2020.09.041>
- Puzzle English. (2020, October 15). *Puzzle English*. <https://puzzle-english.com/>
- Speranskaya, N. I., Iatsevich, O. E., Iudashkina, V. V., & Kovalevskaya, S. A. (2018). Working on terms in teaching foreign language at a technical university. *Bulletin of Chelyabinsk State Pedagogical University*, 2, 156-165.
- Teaching Writing Skills. (2021, January 30). *Skyeng*. <https://school.skyteach.ru/teachingwriting>