

The Experience of Distant Teaching a Foreign Language to Engineering Students during the COVID-19 Pandemic*

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Abstract

The article describes the experience of distant teaching a foreign language to engineering students at Reshetnev Siberian State University of Science & Technology. The main features of the interaction of the students with each other and with the teachers during the educational process using the server of distant learning are revealed and shown. Since Reshetnev Siberian State University of Science & Technology uses the Moodle software for distant learning, the authors have described the main characteristics and advantages of this digital educational resource. Eight key advantages are given in the context of the prospects for using automated systems based on artificial intelligence technologies in teaching foreign languages. The authors of the article have noted some negative influence of modern computer technologies on the process of teaching a foreign language at a higher educational institution as well.

Keywords: Foreign Language, Distant Learning, Educational Process

Introduction

Modular Object-Oriented Dynamic Learning Environment (Moodle) software allows teachers and students to interact effectively online [7]. The creation of the Moodle learning management system was based on the basic principles of the work of such scientists as Lev Semenovich Vygotsky, John Dewey, Jean Piaget, Ernst von Glaserfeld.

The main task of this digital educational resource is distant learning, which is represented in the remote interaction of teachers and students, reflecting all the components inherent in the educational process (goals, content, methods, organizational forms, teaching aids). In other words, distant learning is an independent mode of study, in which information technology is the main tool [5], [10], [14], [16], [17]. The learning material is presented in the form of modules, including various types of tasks, guidelines for studying topics or performing exercises, explanations for practical tasks, theoretical resources, terminological dictionaries and references of the necessary literature. Teachers are in touch with students and have the ability to constantly monitor their activities. The system allows teachers to create web courses and fill them with educational content and provide professional orientation [15].

Speaking about the main advantages of this software, it should be noted that it is easy to use by any side of the educational process (teachers and students). The program allows students to set up and edit their user accounts, each participant can increase or decrease the rate of delivery of the material, choose convenient learning time and vary the content of topics.

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This electronic resource contains a large set of components for effective information exchange: lesson, chat, questionnaire, forum, etc. General and thematic forums allow all course participants to jointly discuss professional issues, ask for the opinion of colleagues, exchange files. In the forum discussion can be held, and in the chat discussion takes place in real time. All the material being covered, tests with teacher's comments and portfolio of each student are saved in the system. One more advantage of the electronic platform Moodle is that the assessment of students is as impartial as possible, since, for the most part, it is automatic. In order for students not to forget about the upcoming classes and the deadlines for turning their homework in, an e-mail distribution is organized. Teachers can control the activity and time of students' academic work in the network. And finally, the program checks for plagiarism. Students' work uploaded into the system is checked for plagiarism, and teachers receive a link to a report with detailed statistics of matches. The electronic platform Moodle is a modern, constantly evolving digital educational environment, it allows to preserve the traditional values of distant learning as much as possible [3], [4]. The programs allow teachers to spend their time more efficiently, as they make it possible to collect statistics on students and understand how they digest a particular topic, and taking it into account, offer material for further study. The functionality of the platforms can be easily expanded to meet the needs of a specific group of students or one individual student.

Using electronic resources in education has a positive effect on the motivation of students, since the desire to learn how to use the latest technologies is a powerful factor in enhancing learning motivation [8]. It allows to form necessary competences [3], [15], to build an individual educational route [1], facilitates life-long learning [2]. Moreover, these programs assume the individual nature of the student's activity - each student works at a pace convenient for him/her, which corresponds to his/her general training, abilities, skills and abilities, as well as his/her emotional state [11].

D. (S.) Prikhodko, O.(N.) Medkova pinpoint eight key advantages in the context of the prospects for using automated systems for teaching foreign languages based on artificial intelligence technologies: 1) high level of user interaction with authentic material; 2) adaptation of educational materials to any level of knowledge of the language and the rate of assimilation of information in a foreign language; 3) constant self-control and verification of the learned educational material through the use of interactive testing programs and training simulators; 4) the possibility of individualizing the educational process, taking into account personal preferences, language skills and abilities; 5) introduction of automated interactive tutoring technology; 6) the use of training personalization systems that can automatically select educational material, considering the combination of the following criteria: the rate of presentation, the complexity of the material and the sequence of its presentation, taking into consideration the individual needs of each person; 7) the integration of automated technology systems for generating tasks into the educational process; 8) implementation of systems for conducting adaptive testing and its further evaluation, which can independently regulate and determine the level of complexity and sequence of presentation of test items [13].

However, some negative influence of modern computer technologies on the process of teaching a foreign language should be noted. According to some scientists, information technologies, which have become an integral part of our life, create psychological, social and physiological problems [11]. Currently, when the Internet has become an everyday reality, modern students prefer not to spend efforts on finding the necessary information, but simply take it from the Internet. Information has become easy to get, and no one wants to remember it. Therefore, the level of general erudition of students, in particular, cross-cultural knowledge, decreases. In teaching a foreign language, this fact is very important, since knowledge of the country of the target language, its history, geography, literature is the main component of foreign language communicative competence. To some extent, the use of computers and the Internet by students prevents the formation of foreign language communicative competence. Students do not develop many communication skills and abilities - reading in a foreign language, translation, creating their own statements in a foreign language (especially in writing). Students forget how to think, reflect upon what they have read, they are not developing the skill to hold a discussion in a foreign language [9]. There is no need to analyze a story you have read when you can use a ready-made text analysis, an essay on the Internet. It is very difficult for teachers to teach literary translation of a text in a foreign language if students use ready-made translations from the Internet [6].

Object and Method

The object of our research is the peculiarities of the interaction of the students at Reshetnev Siberian State University of Science & Technology with each other and with the teachers during the educational process using the server of distant learning. Due to the spread of Covid 19, all the students were forced to switch to distance learning in a short time frame. We have also considered the prospects for using automated systems for teaching foreign languages based on artificial intelligence technologies, and shown some negative influence of modern computer technologies on the process of teaching a foreign language or using it as a medium of instruction in university educational activities [9].

Results and Discussion

During distant learning online at Reshetnev Siberian State University of Science & Technology, using forums and chats, P. Volsky's conclusions that written communication exceeds the capabilities of students were confirmed [12].

We noticed the following features:

- 1) Students mostly use either banal phrases and clichés or use machine translation made by electronic translators;
- 2) There is a tendency to mix languages, write Russian words in Latin, because the students do not want to look the words up in the dictionary or these words have not been translated by an electronic translator;
- 3) Adding Russian endings to English words, i.e. transferring Russian grammar into a foreign language;
- 4) There is a significant number of grammatical and spelling mistakes, misuse of vocabulary, word order is typical for the native language.
- 5) Some students are not ready psychologically to communicate with the teacher. On the other hand, there are some students who, despite their limited knowledge of English, try to communicate in the same way as they do in their native language on social networks using an electronic translator actively, that is, they joke, argue, ask questions, answer them, invite on a date, etc. The role of the teachers in this case is only observant and encouraging, they do not interfere with students' communication in a foreign language on topics that are interesting and relevant to them, for example, study, communication with other teachers and the difficulties of distant education.

As we can see, some students are not ready for distance learning psychologically and technically, for interacting with their fellow students only online, without classroom control from a teacher, some students "get lost", cannot motivate themselves to perform tasks on time, or even come to the site to understand where the tasks are, how to perform them, when to turn them in, etc.

The discovered technical problems involve the absence of necessary equipment for learning (laptops, computers), since some students only have a mobile device, and with its help it is not always possible to perform all tasks, for example, create a presentation or type some text in doc, docx. The students sometimes lack the skills to do this.

During the research we have noticed a number of interesting facts about the influence of the gender factor on the learning process, both in the traditional and in the distance format. If there are well-performing girls in the group (at least one), the discipline and academic performance of the group as a whole increases. If there are no girls in the group, the discipline and academic performance are at an average level. If the girls in the group do not show great success or do not attend classes regularly, the young men do not try hard to perform well in their studies.

The students who are rather successful in real life do not always manifest themselves in the same way in a virtual environment. They cannot motivate themselves to do everything on time or hope that at the last moment they will have time to do everything. In practice, they cannot get the things done because of the substantial volume of tasks.

During the period of distance learning, we have also noted the fact that the pedagogical side of the educational process in higher education is impaired, namely it is impossible to build subject-to-subject relations that form the basis of pedagogical interaction. Teachers fulfill only the functions of organizers and controllers of student performance of educational tasks, but at the same time they cease to act as equal subjects of pedagogical interaction, which inevitably worsens the quality of the educational environment.

It is no question that such a phenomenon as team spirit is being lost, because there is no "team" as it is. Distant learning allows only to organize interaction of the "teacher - student" type, but not "student - student" or "student - group", which is undoubtedly the disadvantage for such a discipline as a foreign language, where the communicative aspect of the pedagogical process is the leading condition for the success of learning.

A foreign language, being a "broad" subject, carries a huge educational resource. In this regard, we should note the negative impact of distant learning on the educational aspect of the pedagogical process. Learning a language remotely loses its educational potential. One of these reserves can be the orientation towards the culture of the country of the target language, considering cultural and regional peculiarities in communication, as well as fostering communicative-speech tact, sociability in communication; fostering activity in solving communicative and cognitive tasks, and fostering the culture of communication in general. Thus, the process of mastering a foreign language in class at a higher educational institution is a powerful mechanism for the student's personal development. Due to the lack of a communicative environment as it is in distant learning, it makes the implementation of these aspects extremely difficult.

Speaking about our experience of distant learning, it is necessary to mention some of its advantages.

Firstly, distant learning implies open access to educational resources at any time, even if geographic location does not allow students to attend classes.

Secondly, the capabilities of the distant education server make it possible to store the large amount of significant educational information in digital format.

Thirdly, the work on the server allows us to use different forms of academic performance rating and gives teachers the possibility to create individual sets of learning materials. Distant learning is an opportunity for students to form their skills and ability to work in the information space, independently search, analyze and select necessary educational information, and, most importantly, present the result of their work using modern technologies, which is a necessary competence for a specialist.

Moreover, the experience of distant learning will help future specialists to apply the acquired skill in their professional activity: namely, to independently close the gaps in knowledge if it is necessary.

In addition to all of the above, distant learning enables students to study at an individual pace; provides relative freedom and flexibility, and develops the ability to independently regulate the duration of classes. From the point of view of the development of types of speech activity, distant learning has a positive effect on the development of the skill to comprehend written speech in a foreign language. Distant learning has also activated the ability to directly express written speech with the help of essays and detailed answers to questions. This inevitably entailed the need to attract and use new lexical units (even if with the help of online translators) and expanding students' lexical minimum through this.

From the point of view of grammar, we have noticed some improvements as well: due to the need to present answers in writing, students have the task of proper grammatical expression of their utterance, which prompts them to analyze grammatical structures and search for additional information, which results in the expansion of the grammatical minimum. Additionally, the remote form of work has a positive effect on the performance of creative tasks. Since the review of the task is available only to the teacher, the student feels "safe" from value judgments and criticism from groupmates when performing creative tasks, which contributes to the formation of a positive attitude towards learning activities.

Conclusion

Moodle software allows the teachers and the students to interact effectively online, although distant learning has its advantages and disadvantages. Herewith, the students have a number of psychological, social and technical problems during distant learning. A number of students, using the technical capabilities of automated translators, seek to realize themselves during the educational process in a virtual environment, while other students are not prepared for such "lifeless" learning and lose their aspiration to study effectively.

References

- Antamoshkina O I, Zinina O V and Olentsova J A 2020 Methodology of building a master's individual educational route for effective development of professional competencies *J. Phys.: Conf. Ser.* **1691** 012207
- Antonova N.V., Shmeleva Zh.N., Kozulina N.S. Lifelong learning as the way of modern personality development in Russia on the example of higher educational institution of technical and natural-scientific profile//*Journal of Physics: Conference Series*. Krasnoyarsk Science and Technology City Hall. Krasnoyarsk, Russian Federation, 2020. C. 12146.
- Bagdasarian I., Stupina A., Vasileva Z., Shmeleva Zh., Korpacheva L. Accreditation of the university education as a guarantee of the competencies quality in the labor market//19th International Multidisciplinary Scientific GeoConference SGEM 2019. 2019. C. 3-8.
- Bagdasarian I.S., Stupina A.A., Goryacheva O.E., Shmeleva Zh.N. The university digital transformation as a tool for human capital development//*Journal of Physics: Conference Series*. Krasnoyarsk Science and Technology City Hall. Krasnoyarsk, Russian Federation, 2020. C. 12184.
- Bagdasaryan I., Stupina A., Shmeleva Zh., Titiberiya R., Vaitekunene E. Training of IT-specialists in the "Digital Economy"//19th International Multidisciplinary Scientific GeoConference SGEM 2019. 2019. C. 385-392.
- Chertovskikh O. O. Prospects for the use of digital resources in education. [Electronic resource.]// *Baltic humanitarian journal*. 2019. Vol. 8 No. 4 (29). – P. 184 – 187 URL: https://www.elibrary.ru/download/elibrary_41462477_46797006.pdf. (date accessed: 30.01.2021).
- Khudoley, N.; Olentsova, J. 2018 New use of MOODLE tools for distance English language learning (experience of Krasnoyarsk State Agrarian University) / *18th International Multidisciplinary Scientific GeoConference SGEM 2018*, **18**(5.4) pp. 225-232
- Kurenkova T. N., Maslova O. V., Savelyeva M. V., Strekaleva T. V. Foreign language to Master Degree students: approach to the technology selection // *The European Proceedings of Social & Behavioral Sciences (EpSBS)*. ICEST-2020-3012.

URL: https://www.europeanproceedings.com/files/data/article/10005/11411/article_10005_11411_pdf_100.pdf (date accessed: 28.01.2021)

- Litovchenko V.I., Shmeleva Zh.N. Investigation of the English as a medium of instruction as a pedagogical technology in university educational activities// *Journal of Physics: Conference Series*. Krasnoyarsk Science and Technology City Hall. Krasnoyarsk, Russian Federation, 2020. C. 12194.
- Olentsova J A 2020 Distance learning in Russia during the coronavirus pandemic *J. Phys.: Conf. Ser.* **1691** 012219
- Osokina T. M. Specificity of foreign languages teaching technologies in digital ages. [Electronic resource.] // *Digital society as a cultural and historical context of human development/ Editor-in-Chief R. V. Ershova*. – *Bulletin of State University of Humanities and Social Studies*. 2018. – P. 281 - 284. URL: https://www.elibrary.ru/download/elibrary_3544463_10737130.pdf. (date accessed: 30.01.2021).
- Pawlak M. Problems of contemporary foreign language didactics. [Electronic resource.]// *Poznań–Kalisz: Pedagogiczno-Artystyczny UAM & Uniwersytet im. Adama Mickiewicza*. 2009. – P. 77 – 85. URL: amu.edu.pl/bitstream/10593/1476/1/Problemy%20wsp%C3%B3lczesnej%20dydaktyki%20j%C4%99zyk%C3%B3w%20o%20bucy.pdf (date accessed: 30.01.2021).
- Prikhodko D. S., Medkova O. N. Prospects of using automated foreign languages teaching systems on the basis of artificial intelligence technologies. [Electronic resource.] // *Foreign languages: innovations, research prospects and teaching / Editor-in-Chief E. A. Prigodich*. 2019. – P. 585 – 589. URL: http://www.elibrary.ru/download/elibrary_37316368_47583901.pdf (date accessed: 30.01.2021).
- Rozhkova A.I., and Olentsova, J. A. (2020) Case-Study Method as an Educational Technology for Teaching Management Students, 35th International Business Information Management Association (IBIMA), Madrid, Spain
- Shmeleva Zh. Professionally-oriented teaching of a foreign language for future human resource managers at the Krasnoyarsk state agrarian university//20th International Multidisciplinary Scientific GeoConference SGEM 2020. Sofia, 2020. C. 845-850.
- Zinina O.V., Antamoshkina O.I., and Olentsova, J. A. (2020) Methodology for Evaluating the Effectiveness of Investments in Distance Educational Services, 35th International Business Information Management Association (IBIMA), Madrid, Spain
- Zinina O.V., Dalisova N. A. and Olentsova, J. A. (2020) Distance Learning Technologies as the Main Mechanism for Increasing Efficiency Activities of the University, 35th International Business Information Management Association (IBIMA), Madrid, Spain