Experience of using distance learning tools in ESP instruction at technical university: a case of Ukraine

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Abstract

The research was aimed to analyze students' attitudes towards distance ESP learning in respect to its utility, attractiveness, accessibility, motivational potential, educational value and future prospects. For that purpose a survey of bachelor and master degree students of a technical university in Ukraine was used which focused on features of distance learning that were important for them as adult learners. The students' positive estimation of remote ESP teaching with the use of MOOC, Zoom, Classtime and MyGrammarLab tools permitted us to conclude that this instruction mode can promote learning efficiency due to a number of its features: high accessibility, flexibility and convenience of learning, provision of opportunities for language acquisition, development of autonomous learning skills, preparation for future career, advancement in the use of technologies.

Keywords: distance learning; English for Specific Purposes; adult learner; ICT tools;

1. Introduction

The COVID-19 viral outbreak of 2020 caused fundamental changes in education around the globe. Higher education institutions were suddenly forced to shift from face-to-face to distance learning. It was a tremendous challenge for all countries and their education systems, but some of them turned out to be more prepared for it, while others, especially those which had insufficient previous experience of distance education, needed to find quick solutions of difficult problems. In Ukraine, where online learning had not been commonly used before the pandemic, the problem of how to organize the provision of distance learning to students in lockdown was mostly solved by institutions and teachers themselves, which, in spite of all the difficulties, opened a lot of new opportunities and prospects in learning. ICT tools and resources used for distance learning gave access to a lot of information and new methods of its delivery which had not been employed before. At the same time, since the epidemiological situation in Ukraine still remains very serious and university lockdowns frequently resume, teachers need to collect and analyze data and feedback from students to make necessary improvements which permit addressing the students' needs more fully.

Distance education has existed in one form or another since the early 1800s (Garrison, 1989). Moore and Kearsley (1996) defined it as planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements. Distance online learning is rapidly gaining popularity. The number of students joining online courses has been rising dramatically and steadily since 2000 (Smith, Hoderi & Mcdermott, 2019). In

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conditions of COVID-19 lockdowns, the transition to distance education, the use of e-learning and mobile learning technologies, various virtual learning platforms can minimize the impact of the pandemic on the education system (Terenko & Ogienko, 2020).

Numerous studies highlight benefits of online learning at the same time mentioning its drawbacks. For example, the flexibility of online learning, its convenience for students, adaptability of this mode of education to suit individual students' needs, wider access to learning, opportunities for interaction with the instructor, improved academic achievement, provision of a more positive learning experience are usually considered its main advantages. The major negative features which are commonly mentioned are limitations on face-to-face interaction, absence of the real attendance of teacher and students, concerns over the use of technology, an increased workload (Pekel, 2002; Alnemary, Wallace, Symon & Barry, 2015; Gleason & Greenhow, 2017; Dulamă & Ilovan, 2020).

In the context of our study, since university students are commonly classified as adult learners, it is particularly important to focus on advantages which distance online learning provides for adults who have a number of distinctive features as learners defined by Knowles, Holton, and Swanson (2005): their education is closely connected to their practical needs, which urges them to be active participants of learning; they need to understand why the particular learning is valuable for them; they want to use their life experience in learning; they are self-directed personalities, capable of taking responsibility for their learning. Merriam and Bierema (2014) emphasize that self-direction in learning is not a personal attribute of some learners, but a learning process, thus it is appropriate to consider how to teach students self-directedness (p. 63). "Guiding students towards greater learning autonomy for social and self-directed learning is imperative for continuous lifelong learning post-graduation" (Merriam & Bierema, 2014, p. 73). Since learner autonomy is synonymous with self-directedness and contrasted to dependence on the teacher (Merriam & Bierema, 2014, p. 147), we believe that online learning promotes learner autonomy by providing students with flexible and individualized means of accessing information.

Considering that the learner, his/her needs, aims and motives are at the center of the learning process, he/she is not just a passive recipient of information, but an active participant of learning whose interaction and collaboration with the teacher and other learners are the major motivating force of the learning process (Lytovchenko, Lavrysh, Lukianenko & Ogienko, 2020). The realization of such interaction and collaboration can be provided by means of online learning, especially with the use of video conferencing tools.

2. Methodology

2.1. Objective

Our research was aimed to analyze students' attitudes towards distance ESP (English for Specific Purposes) learning in respect to its utility, attractiveness, accessibility, motivational potential, educational value and future prospects for them as adult learners. The results were meant to be used in further decision making on designing and implementing improved strategies during and after COVID-19 lockdown at university that would make the language instruction more efficient.

2.2. Participants

The participants of the study were 212 bachelor and master degree students (aged 18 – 23 years) of Mechanical Engineering Institute of National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (Kyiv, Ukraine) who studied ESP during thirteen weeks of COVID-19 university lockdown and volunteered to take part in an anonymous survey.

2.3. Instrument

The data collection tool was Google Forms application which we used to create a questionnaire for students and process the findings we obtained. When the academic year was over, and we were informed that the study in the next academic year would be conducted online too, a questionnaire of twelve closed-ended questions was suggested to students which focused on features of distance learning that were important for them as adult learners. The questionnaire was designed to elicit relevant information and find out the students' attitudes to distance learning in respect to its utility, attractiveness, accessibility, motivational potential, educational value and future prospects as also the possible factors which promoted the development of such attitudes. The questions were as follows:

1) What device / devices did you use to do the course? You can choose more than one option: PC, laptop, tablet, mobile telephone, other.

2) Which of the tools did you use for the first time, if any? You can choose more than one option: MOOC, Zoom, MyGrammarLab, Classtime, none.

3) Which of the tools did you like best, if any? You can choose more than one option: MOOC, Zoom, MyGrammarLab, Classtime, none.

4) What facilities for learners make MOOC, Zoom, MyGrammarLab, Classtime technologies attractive for you, if any? You can choose more than one option: facilities for interaction with interesting and informative learning contents, facilities for work at one's own pace and convenient place, facilities for communication in forums, facilities for work in groups, facilities for communication with teacher and peers in real time, facilities for communication with peers from around the world, facilities for receiving immediate feedback, others, none.

5) Were you satisfied with the learning content? (Answer options: yes, no).

6) Were you satisfied with the multimedia presentation of the learning content? (Answer options: yes, no).

7) Do you think distance learning helped you become a more independent learner? (Answer options: yes, no).

8) Do you think distance learning could help you improve your academic performance (Answer options: yes, no).

9) Did distance learning make you more motivated as learner? (Answer options: yes, no).

10) Did you have any difficulties in distance learning? If yes, you can choose one or more answers: lack of real face-to-face communication with peers, inability to ask teacher or peers for help, lack of support from teacher and peers, problems with understanding content material without the teacher's help, lack of self-organization and self-management skills, problems with the Internet, others (specify what kind of difficulties), none.

11) Do you find this experience of distance learning useful? If yes, you can choose one or more answers: I learnt to use new e-learning tools, I became more confident in using educational technologies, I became more self-organized in learning, I learnt to be more independent as learner, I became more prepared for my future career, other.

12) Rate your overall distance learning experience (answer options: negative, good, excellent).

2.4. Procedure

At the beginning of the lockdown, the students studied MOOCs (Massive Open Online Courses) on edX and Prometheus platforms. They were ESP and English for STEM (Science, Technology, Engineering, Mathematics) self-paced courses of 4 – 5 weeks duration, provided by these platforms free of charge. After students' completing the MOOCs, in order to meet their need in communication which they lacked while doing MOOCs (as followed from their feedback (Lytovchenko & Voronina, 2020) we made necessary adjustments in the design of further instruction during the lockdown period which was prolonged and added other tools, particularly, Zoom video conferencing technology, MyGrammarLab platform by Pearson,

Classtime platform (assessment tool). At the end of the course the students evaluated these tools from perspective of their utility, attractiveness, accessibility, motivational potential, educational value and future prospects using the previously described questionnaire.

2.5. Data analysis

Since we used Google Forms application as the data collection tool, the findings obtained were processed automatically and analyzed by the authors.

3. Results

The survey of students aimed to analyze their experience of and attitudes towards distance ESP learning in respect to its utility, attractiveness, accessibility, motivational potential, educational value and future prospects during COVID-19 university lockdown showed that more than three quarters of the students (76%) estimated their distance learning experience positively: 64% – as good and 12% – as excellent. However, almost a quarter of them (24%) had negative experience.

To do the course the students used a range of devices: PCs (29%), laptops (69%), tablets (4%), mobile telephones (47%). The technologies used in distance learning were new for a considerable number of students (MOOC was used for the first time by 32%, Zoom – by 88%, Classtime – by 46% and MyGrammarLab – by 49% of respondents). As testified by the results, Zoom was not only new for the majority of students but also the most preferred by them (as stated by 51% respondents), other tools being also quite popular (Classtime – with 34%, MyGrammarLab – with 24% of respondents).

Of particular interest for us was to find out what features of MOOC, Zoom, MyGrammarLab and Classtime were found the most attractive by our respondents. As can be seen in Figure 1, the majority of our students (60%) appreciated the ability to work at convenient pace and place. Also they highly valued the ability to communicate with teacher and peers in real time (51%). Approximately 1/3 of the students liked the ability to interact with interesting and informative learning contents (36%), enjoyed the ability to work in groups (30%), liked the ability to receive immediate feedback (27%). Only 11% of those who took part in the survey did not find any of the facilities provided for them by the above mentioned tools attractive.
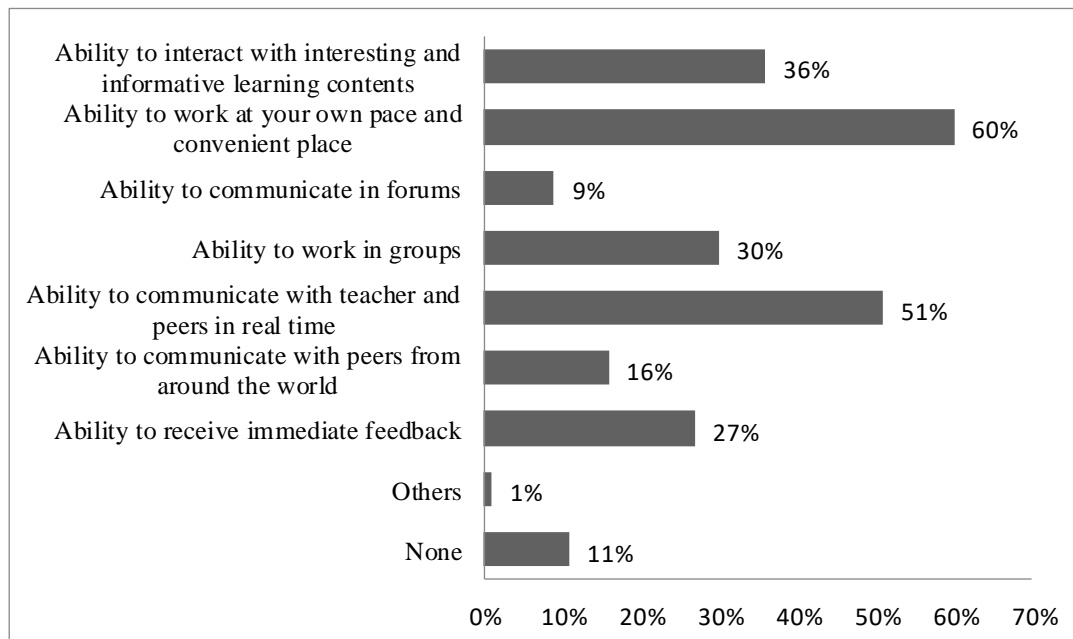

Fig. 1. Features which make MOOC, Zoom, MyGrammarLab, Classtime attractive for learners

Answers to the question about the learning content revealed that three quarters (75%) of the students were satisfied with it. Almost the same number of students (74%) was also satisfied with the multimedia presentation of the learning content.

In the context of our study focused on adult learners, another important feedback which we received from our students concerned the autonomous learning skills which are fundamental for effective employment and active social life in the 21 century. Over half of our respondents (56%) considered that distance learning helped them become more independent as learners. Almost half of them (46%) found that distance learning helped them improve their academic performance. Distance learning also made students more motivated, as stated by almost three quarters (73%) of them.

In our study we were particularly interested to know what kind of difficulties our students had in distance learning. As can be seen from Figure 2, only 13% of those surveyed indicated that they did not experience any problems. All the rest of the students, however, reported having certain difficulties. Approximately one in two respondents (53%) mentioned problems with understanding content material without the teacher's help. A little bit smaller number of students reported problems with the Internet and lack of real face-to-face communication with peers (47% and 45%, respectively). About one third of the learners reported having difficulties caused by lack of self-organization and self-management skills (32%) and inability to ask teacher or peers for help (32%). Nearly a quarter of students (24%) felt lack of support from teacher and peers.
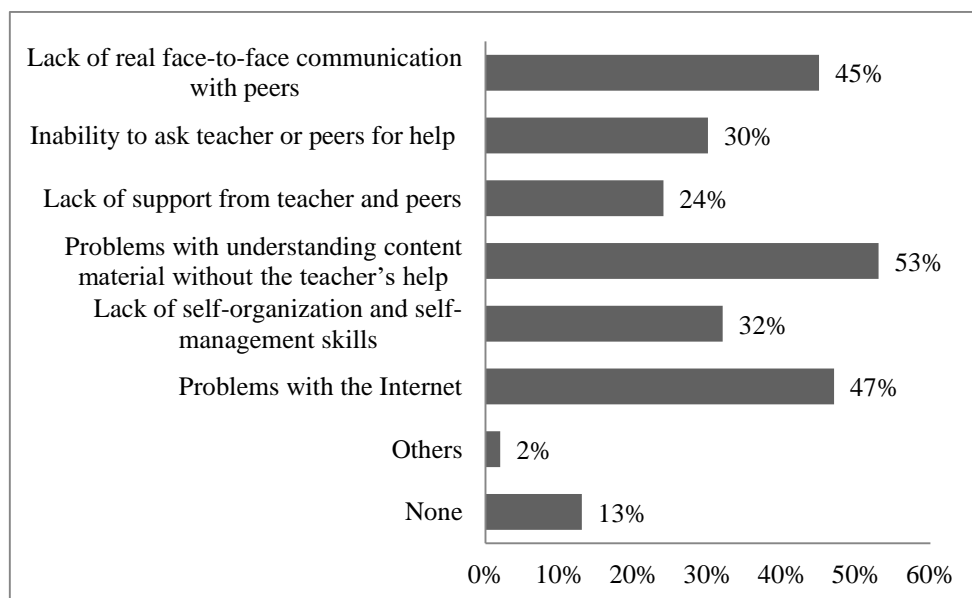

Fig. 2. Difficulties experienced by students in distance learning

As evidenced by the results of our research, the students on the whole realized the usefulness of distance learning experience (see Figure 3). The majority of the students found that the main benefits were learning to use new e-learning tools and be more independent as learners (reported by 50% and 40% of respondents, respectively). The other benefits they chose as relevant were becoming more prepared for the future career, more self-organized in learning, more confident in using educational technologies, as reported by 32%, 29% and 21% of respondents, respectively. One student answered that this experience might be useful in case the lockdown repeated in the future. Another one said the learning became more "civilized". 4% of respondents found this experience useless (one respondent – even harmful) for future learning. One of these students explained that the teachers were incompetent, the other – that he woke up at 3 pm instead of 7.30 am (as in offline learning), which was not good for his health.
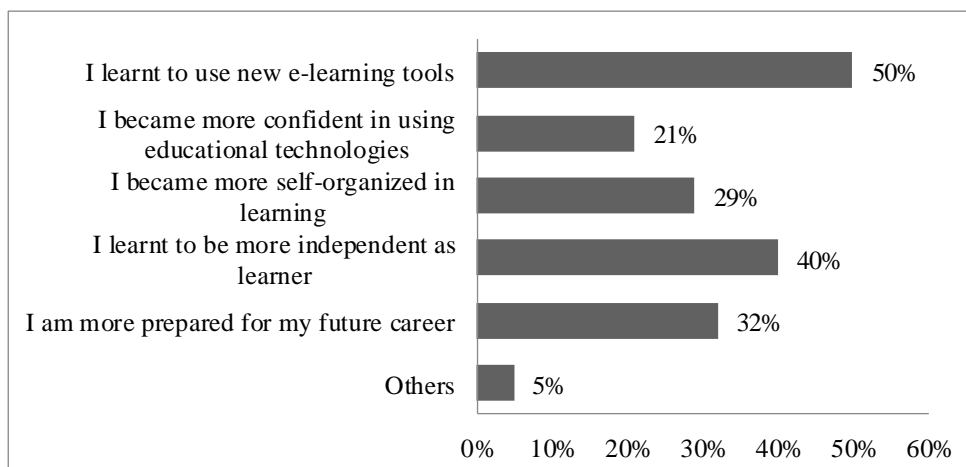
Fig. 3. Reasons why students found distance learning experience useful

4. Discussions

The results of students' survey aimed to analyze their attitudes towards distance ESP learning in respect to its utility, attractiveness, accessibility, motivational potential, educational value and future prospects during COVID-19 university lockdown showed that our choice of ICT tools, methods of instruction, learning materials and information delivery for the online course was quite adequate, as follows from the fact that the overwhelming majority of students (three quarters of those who were surveyed) assessed their on-line learning experience as positive. These results are consistent with findings received in other studies (Chirca & Pânișoară, 2020; Işık, Karakış & Güler, 2010; Pekel, 2002; Lavrysh & Mukan, 2020; Lytovchenko & Voronina, 2020) which revealed that most of the students felt more comfortable in distance learning and expressed general positive attitudes towards it.

However the fact that almost a quarter of respondents reported having negative experience, in our opinion, may demonstrate that the students themselves or their teachers were not ready for the distance learning, since the complete lockdown was announced absolutely unexpectedly for universities in Ukraine. We can also explain this by lack of students' satisfaction, motivation, independent learning skills, which is reflected in their answers to the questions analyzed further. In our opinion, students' negative experience can also be explained by factors which are perceived in literature as drawbacks to distance learning: lack of technological competencies on the part of teacher or student (Yusuf, 2020), resistance to change on the part of teachers (Parrott, 1995), student passivity (Filipczak, 1995), hardware limitations (Kerka, 1996) and learner isolation (Kubala, 1998). We think there may be other possible reasons connected with lack of proper conditions for learning at home (because of small children, other family members, housing conditions) or unstable Internet connection, especially in rural areas of Ukraine, as was previously pointed out by Lukianenko and Vadaska (2020).

The fact that our students mostly used mobile devices to do the course, in our opinion, implies high accessibility and convenience of learning, which, we believe, had positive effect on students' involvement, achievement and attitudes to it. This is in line with the study by Mockus, Dawson, Edel-Malizia, Shaffer, An and Swaggerty (2011), who explored how mobile devices could be utilized to provide instructional options for adult learners and demonstrated that adults valued the ability to learn at any convenient time and place and found their learning experience motivating and enjoyable.

Since all the four ICT tools (MOOC, Zoom, Classtime and MyGrammarLab) were new for a considerable number of students, we suppose, it added certain difficulties for learners, especially at the beginning. However, Zoom, which was used for the first

time by nine out of ten respondents, in spite of its novelty and resulting difficulties, turned out to be the most preferred technology by more than half of those surveyed. Based on the students' answers to this and further questions concerning their preferences of interactive features of the ICT tools they used, the popularity of this mode of delivery among the students can be explained by the fact that it provides the opportunities for real communication and interaction between teacher and learners, creates the atmosphere close to that in a traditional classroom, with the possibilities to see the faces, hear the voices and understand the emotions, which is particularly supportive for adult learners. This proves the high appropriateness of inclusion of Zoom in the online learning.

Almost 90% of respondents highly appreciated the facilities provided by MOOC, Zoom, MyGrammarLab and Classtime for work at convenient pace and place, communication with teacher and peers in real time, interaction with interesting and informative learning materials, work in groups, receiving immediate feedback. These and other features of online learning were also highly estimated in a number of other studies which involved adult learners. For instance, Ekmekçi (2015) found that the overwhelming majority of the students enjoyed their English language distance course because they were not restricted by time and place. He considered the flexibility one of the strongest positive features of the distance learning. Nguyen (2015) also noted that flexibility and convenience are among the key features of online learning due to which the demand for it is growing. Lee, Srinivasan, Trail, Lewis and Lopez (2011) found that students particularly valued and benefitted from interaction with teachers and peers. Lee and Osman (2021) revealed positive attitudes of university students toward online collaboration in learning.

Answers to the question about the learning content showed that 75% of the respondents were satisfied with it, which indicates its relevancy and shows that our primary consideration in the course design, meeting the learning needs of the students, was mainly achieved. However, the fact that each fourth student was discontent with what they learnt signifies that we should make certain revision of the learning materials and provide the students with possibilities to select a certain percentage of topics and materials for learning. It may seem interesting to point out that virtually the same number of students (26%) was also unsatisfied with the multimedia presentation of the learning content. In this respect, we think further study is needed to find out what changes and improvements the students suggest in the choice and use of tools, technologies and methodologies for further online learning in lockdown.

Since our study was focused on adult learners, one of the central questions was if the online instruction helped them become more independent in learning. The affirmative answers were received from more than half of the respondents (56%), which we find quite positive, given the fact that the development of autonomous learning skill requires not only the use of appropriate strategies by teachers, but also a high degree of students' commitment. Thus our study supports evidence from previous observations (e.g. Smith, Hoderi & Mcdermott, 2019; Chugai, Terenko & Ogienko, 2017; Lytovchenko, Ogienko, Sbruieva & Sotska, 2018) that adult learners understand the need for being responsible for their learning and time management. Similarly to our study, in a survey conducted by Kirtman (2009), adult students argued that online learning enabled them to be more self-guided, as they could plan their time and study more effectively.

We can also assume that distance learning with the use of MOOC, Zoom, MyGrammarLab and Classtime permitted us to create the learning environment supportive for students, as almost half of them (46%) reported that distance learning helped them improve their academic performance. This finding is in line with that of Stavytska (2017) who revealed increased levels of formation of students' foreign language competence during multimedia online learning. However, it is contrary to that of Xu and Jaggars (2013) who found that the online format had a significant negative impact on both course persistence and course grades. They considered that students' poor performance in online courses may be in part due to low levels of "teacher presence" or the sense that the instructor is a real person who is supporting and motivating students to learn the material. In our case we believe we could

mitigate this drawback of online learning by the use of Zoom which served as a platform for interaction between teacher and students and where they could see live faces of each other.

The results of our study may indicate that the "presence" of the teacher and the supportive learning environment created by him or her also played an important role in raising the students' motivation (73% of respondents stated that the online course made them more motivated). It is particularly important for us, since, in our opinion, the factor of motivation in online learning during lockdown is even more critical than in face-to-face or blended learning, when students regularly attend the university, have classes according to the timetable, and thus are more disciplined and organized by the institution.

A central focus of this research was the identification of difficulties experienced by our students in distance learning. 87% of those surveyed reported having problems while studying the course: hardships with understanding content material without the teacher's help, technical problems (with the Internet connection), lack of real face-to-face communication with peers, lack of self-organization and self-management, inability to ask teacher or peers for help, lack of support from teacher and peers. These results support multiple previous researches which pointed out to the lack of teacher presence (Kirtman, 2009), limitations on interaction with teacher and peers (Smith, Hoderi & Mcdermott, 2019), poor self-management and independent learning skills (Xu & Jaggars, 2013), technical issues (Smidt, Bunk, McGrory, Li & Gatenby, 2014).

The students' answers to the questionnaire testify to the fact that the overwhelming majority of them (96%) found their distance learning experience useful. For the biggest number of students the main benefits were learning to use new ICT tools, being more independent as learners, preparing for the future career, becoming more self-organized in learning, becoming more confident in using educational technologies. Similar findings were also obtained by other researchers. Thus, Nguyen (2015) found that students can use online learning as the foundation for professional development. Pekel (2002) revealed that most of the students involved in online learning reported the increase in self-confidence, ability to complete the tasks independently and take the responsibility for their learning. We also fully agree with researchers (Smith, Hoderi & Mcdermott, 2019; Smidt, Bunk, McGrory, Li & Gatenby, 2014) who came to the conclusion that online learning requires a lot of self-discipline and initiative from learners. Consequently, online learning is especially difficult for students with poor time management and independent learning skills.

The limitation of the study is that it deals with only one distance learning course in one state-funded Ukrainian university where ESP is a mandatory discipline in all undergraduate and graduate programmes, which does not allow for generalisations on a broader scale of ESP learning at universities and colleges of Ukraine.

5. Conclusion

The students' positive estimation of the emergency remote teaching of ESP with the use of MOOC, Zoom, Classtime and MyGrammarLab tools permitted us to conclude that this mode of instruction can promote learning efficiency due to a whole number of its features: high accessibility, flexibility and convenience of learning, provision of opportunities for language acquisition, development of autonomous learning skills, preparation for future career, advancement in the use of technologies. The main lesson for us which may also be of use to a broader international education community was that online ESP learning can be dramatically improved by introducing the "teacher presence" via video conferencing tools like Zoom into the combination of other e-learning platforms. By providing the multiple opportunities for interaction and group work these technologies add the "human touch" of traditional face-to-face classroom and considerably compensate for isolation of students, thus significantly raising their motivation and involvement in learning.

To develop a full picture of distance ESP instruction, there is need for future research which should focus on teachers' perspectives on the use of MOOC, Zoom,

MyGrammarLab, Classtime and other tools during the COVID-19 lockdown at university.

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