

Laura Ioana V. Leon
„Grigore T. Popa” University of Medicine
and Pharmacy Iasi, Romania
Faculty of Medicine, Department of
Preventive
Medicine and Interdisciplinarity
laura.leon@umfiasi.ro

Professional paper
UDC: 371.3:811.111]:004.738.5
UDC: 616.98COVID19:378
DOI: 10.19090/MV.2023.14.147-159

THE EFFECTIVENESS OF TEACHING ESP (ENGLISH FOR SPECIFIC PURPOSES) ONLINE DURING THE COVID-19 PANDEMIC

ABSTRACT: The aim of this paper is to show how we managed to make a rapid switch from the on-site classes to the online ones because of the COVID-19 pandemic in the context of teaching English for Specific Purposes (ESP – Medical English) at the “Grigore T. Popa” University of Medicine and Pharmacy Iasi, Romania. The major issues were to keep our students’ interest in our classes, making our courses and seminars as engaging as possible. The most important ideas that guided us throughout the process were not to forget that, while dealing with a foreign language course, we would have to try to improve the traditional skills (reading, speaking, writing and listening), while trying to find the best fitted activities to carry out such activities in the online medium.

Key words: English for specific purposes, online teaching, medical students, COVID-19 pandemic, online resources, artificial intelligence, reading, speaking, writing, listening.

ЕФИКАСНОСТ ОНЛАЈН ПРЕДАВАЊА ЕНГЛЕСКОГ ЈЕЗИКА СТРУКЕ ТОКОМ ПАНДЕМИЈЕ КОВИД-19

АПСТРАКТ: Циљ овог рада је да покаже успешност преласка на онлајн наставу због пандемије вируса КОВИД-19, у контексту наставе енглеског језика струке (ЕСЈ – Медицински енглески) на Универзитету за медицину и фармацију „Григоре Т. Попа”, Јаши, Румунија. Главни изазов са којим смо се суочили био је како да задржимо интересовање наших студената за часове енглеског језика. Трудили смо се да наше курсеве и семинаре модернизујемо и учинимо што занимљивијим. Уз то, било је изузетно важно да током процеса онлајн предавања унапредимо традиционалне вештине (читање, говор, писање и слушање) и пронађемо најадекватније активности за обављање наведених активности у онлајн окружењу.

Кључне речи: енглески језик струке, онлајн настава, студенти медицине, пандемија КОВИД-19, онлајн ресурси, вештачка интелигенција, читање, говор, писање, слушање.

1. INTRODUCTION

In the aftermath of the pandemic, what plenty of us may have come to realize is that online teaching has brought forward multiple benefits in the long run. It is true that many universities have gone back to face-to-face classes at this point, in the hope of re-establishing a “normal” environment. However, what people should keep in mind is that they can still make use of tools and strategies they have come up with for online lectures, since online education has proven to be effective in various ways.

The transition from in-person classes to online ones presupposed a change of attitude on behalf of the teachers. They shortly became aware of the fact that their lectures needed to be adapted to the new online format, which was mostly foreign to everyone (simply because no one was particularly accustomed to it). The risk of a poorly-organized online class is that students can associate it with a mere video from the internet, which they can always leave playing in the background or even abandon it in no time, should it fail to be attractive. In one such case, teachers have to rethink the ways in which they deliver their information and how they structure it. As it was said in one study carried out after the first months of the pandemic, “Internet based learning means an individuals’ confidence and self-belief in their ability to master an online course or online learning activity” (Rohmawati 2021). As expected, they are required to engage with their students differently, create a professional setting within a generally informal context, while still keeping it cordial, for the sake of reassuring students that they can always reach out to professors for further assistance. It is quite compelling that online education has challenged teachers not only to rethink how they are supposed to come forward, but also change the actual content of their courses, have them suited to the students’ actual needs in some exceptional situations.

On the other side of the spectrum, students have had to reconsider their own attitudes towards university life and what it truly implies. Being secluded during lockdowns, many began to pay additional attention to their schedules and become more diligent than ever in order to not fall behind with weekly requirements. In some cases, young individuals started to learn how to juggle their student life with their jobs, getting to prioritize what proved to be beneficial to them. “Accessibility” is a significant keyword when it comes to online education, reminding us that students have had the chance to attend more classes than they would have before the pandemic. The same applies to conferences as well, which had an increasing number of participants over time, since neither teachers nor

students had to be concerned with travel expenses anymore and could afford to hold presentations in any corner of the world at ease.

As a way of maintaining a strong(er) interaction with students within an online system, some teachers have even altered their evaluation formats, opting for weekly assignments (all adding points to a final grade), final essays or even open-book exams. In the case of the latter, it goes to show that students' critical input was the main focus, since tests no longer relied on rote learning, but rather guaranteed a more active academic journey overall. These evaluation techniques are bound to be preserved from now on, as teachers and students keep returning to onsite classes. As demonstrated throughout the past two years, such procedures would lead to less stressful exam conditions and a more effective use of one's own set of abilities.

2. LEARNING CONTEXT

It is obvious that these are only changes that have taken place everywhere, no matter the teaching field. This paper is going to address the problem from the perspective of teaching English for Specific Purposes (ESP) to medical students at "Grigore T. Popa" University of Medicine and Pharmacy Iasi, Romania. What is worth mentioning from the very beginning is that the transition to the online medium was possible in one week only, the University being able to find resources to make the transition as smooth as possible. The existence of an e-platform that had been available both for students and teachers since 2010 probably made it easier for the majority of the academic staff to rapidly adapt to the new challenges. Before the pandemic we were required to upload all our didactic material in electronic format on the e-platform. This was a great thing because both teachers and students were ready to use these pre-existing materials. Nonetheless, that was only the beginning of a new era that meant the revisiting not only of such materials that we already had in electronic format, but also the re-thinking of strategies and methodologies to teach online. That happened fast and it was challenging mainly because we had to stay alert during the process, learning from mistakes and trying not to repeat them. Likewise, students – though we are not here to give a students' perspective – had to learn, in their turn, to adapt to the new challenges, which meant being able to attend online courses, focussing on keeping in mind some information that was delivered to them in a completely new way.

3. DIDACTIC STRATEGIES

We are aware of the fact that each university had its own strategy to cope with the challenges of the online system. At our university all classes, no matter whether it was a course or a seminar, were delivered synchronously, i.e. no course was pre-recorded and uploaded so that the students may watch it later. “The synchronous mode means that the teachers carry out online learning at a certain time in a week” (Damayanti & Irwan 2021). We believe that was a good thing because it maintained the teacher-student interaction and, though at a diminished scale, during a course, for instance, teachers could still pick up signs of misunderstanding or boredom. Actually, during online teaching we could say that the feedback a teacher could get about students’ satisfaction was even more rapid than in the face-to-face classes when students were more likely to pretend that they were listening to the teacher when, in fact, they would pay attention to something else. They could still do that online and probably distractions were by far too many, but most of the students did not care to leave the course if they were not interested. Even the absence of the turned on camera could be an indicator that students were not really there or, at least, not that interested. Coming back to the idea that all our ESP courses and seminars meant direct interaction between our teachers and students, we can say we preserved an important aspect of the effective teaching process. As we have already said, due to the existence of the e-platform, we were in no need to search for didactic materials from the very beginning. However, as we had started to get acquainted with the new teaching style, out of the wish to improve the didactic act we gradually started to discover how many opportunities were open to us and that it would be a pity not to make use of them. Even after the pandemic – if we can still sound that optimistic (taking into account the fact that in April we did return to the on-site classes) to say we are already experiencing the post-pandemic era – we could say that there are plenty of things that can still be used, things that have already proven their effectiveness and one should never give them up once we are back to the on-site format.

When referring to the way we adjusted to the online teaching system, we mainly have in view the teaching strategies and methodologies we had to use in order to make our classes as effective as possible, keep our students’ interest (this being a major issue as, it has been proven, in the online format people are more likely to lose their interest more easily). This was not an easy thing to do, but, with some effort, we do believe that classes could be successful and students’ interest could be kept, thus making the entire teacher’s effort worthwhile. In order to talk about some ESP classes that were delivered online, we have to see what ESP as

such meant before the pandemic. ESP teachers know that it has been a challenge in the last decade or so to teach ESP. And we are not referring here only to the specificity of our ESP, i.e., Medical English, but to the whole idea of teaching English for specific purposes, no matter the field. With Medical English things have started to change a lot once we started to be confronted with globalization and the rapid development of technology. If we had not kept the pace with technology, we probably would not have been here today. Our world is continuously changing and unless we are willing to keep the pace and rhythm with it, we will not be able to provide a successful didactic act. Thus, globalization meant the realization that ESP is a great opportunity for foreign language teachers to overcome some traditional boundaries (which saw ESP as a mere transfer of specialized vocabulary) and go out there to tell students that teaching a foreign language is about teaching another culture. No matter how well we might speak a language, in the absence of cultural knowledge we would never be able to call ourselves proficient users of that foreign language. Years before the pandemic, we started to talk during our courses about the idea of being able to understand a foreign language in the context (cultural context) where it is produced. Because of the globalization, even Medical English as such had to be understood in the context of using it in a different healthcare system (more than a decade ago we started to see how many of our Romanian doctors made the decision to go abroad and carry their professional activities in a different cultural context). Thus, besides starting to deal in our courses with topics that would familiarize students with such notions, we also started to develop courses that would offer deeper insights into other healthcare systems (most of the time, as we taught English, references were made in relation to the British healthcare system). This is how we came to design an elective course on developing communication skills in English for health care professionals. A doctor's knowledge of medical vocabulary is undoubtedly not enough when it comes to dealing with an English-speaking patient, as the medical act is not a mere exchange of words either. The patient always has to be seen in his / her own context, meaning that we have to be aware of his / her cultural context in order to be able to adjust our way of interacting with him / her so as not to cause offence. Knowing that health choices are always culturally dictated also helps to better understand the patient. Thus, an elective course on developing such communication skills (that would focus on the idea of intercultural communication) also proved itself quite necessary and it was the job of the ESP teacher to design it. On the other hand, the development of technology also made us aware that medicine is not a field that was a stranger to that. Healthcare professionals among

each others, but also doctors and patients started to communicate via the online medium, so some notions on electronic communication were also necessary. Likewise, with the increased presence of healthcare professionals on social media, we also thought it would be important to touch upon some notions that were related to these ideas as well. They also had in view things that were related to cultural issues (the Internet as well is culturally sensitive) but also to the problem of communication. A doctor's online presence would still have to do with his / her possibilities to send a message to his / her target audience. Telemedicine was also a topic that we dealt with, even before the pandemic. Telemedicine was already a significant sector of the US healthcare system and wishing to keep our courses and seminars updated, we did select information related to the idea of telemedicine, focusing, of course, on elements that had something to do with our job, i.e. trying to see what may actually differ when trying to communicate with the patient in the online medium.

3.1. The COVID-19 pandemic and steps for skill improvement

The COVID-19 pandemic has definitely brought some new challenges that we would have never thought of, but basically it was a good thing medical students had access to that kind of information before. In a way we could say that they were more ready to face these new challenges. Indeed, as we have already said, the transition to the online medium did not seem that difficult for that reason. The pre-existence of the didactic materials in electronic format made it easier for us to start looking for new things that we could use now and benefit from. And that was exactly what we did. It did become important at that point that our job was still that of teaching a foreign language and besides all the additional information our students might get we still had to find ways to focus on the improvement of the most important skills: reading, speaking, listening and writing. That was the real challenge, to find ways to deal with all these activities at least as effectively as we used to deal with them in the face-to face classes: "Additionally, distance education has been counted as an efficient, focused, and significant way of acquiring knowledge, as well as keeping contact with shifts in this pandemic" (Lassoued et al. 2020). Probably that also had to do with the teacher's ability to adapt and keep control of his / her classes in this new format – that was undoubtedly a challenge for some of the teachers that may have not used the Internet that much before the pandemic; though accessible to anyone, it does require some technical skills that need to be learned. The good part was that soon enough teachers and people all over the world, in order to stay connected during such hard times that had never

been experienced before, started to share information, tips, experiences, and we could easily learn new things. Online workshops and conferences started being organized and teachers from all over the world with no restriction whatsoever started to communicate via the online medium. Sharing experiences at that point was a major thing. We not only learned about new techniques and activities we could use, but we also became aware of the endless possibilities we could find on the Internet in terms of applications that we could use in our classes and activities that were especially designed for these types of classes.

The star of the learning skills in the online classes definitely became listening. No one used to ignore that skill before, i.e. everyone knew its importance in the general context, but we always had to rely on technical devices that sometimes were not that easy to access. In the online classes we were in front of electronic devices already so we just needed some listening materials that we could use in our class. Fortunately, as we have already said, such materials were everywhere on the Internet. With the proper guidance provided by a good foreign language teacher, such materials could be selected and then used in classes. Databases such FutureLearn, for example (this database gathers contributions in so many areas and fields from important universities in the UK and other countries) used to provide such useful materials even long before the pandemic and it is no wonder that its popularity has significantly increased with the pandemic. This is only one example of such an online database that we could access in order to find useful materials from which our students could benefit. As far as foreign language classes are concerned, we are tempted to say that the listening activities became very widely used as it was easier than ever and students' response to such activities was very good (our students' generation during the pandemic – but even before that – was already spending a lot of time in the online medium and probably one of their favourite pastimes was that of listening to video materials in the form of podcasts or YouTube videos that are still very popular among young people), so that was a very appealing way to teach about various topics. For example, one such useful material that started from listening as an activity (but it could also be developed for other purposes), was a FutureLearn course, *Discover Dentistry* that was very much appreciated by both 1st and 2nd year students in Dental Medicine at our University. The course started with a video material (that was also provided with the script that could be previously uploaded by the teacher in Class Materials) entitled *Dentistry from the archive*, where professionals from the University of Sheffield gave a short history of dentistry, also touching upon the evolution of instruments, techniques and materials used in the dental office. The course went on

with details on a dental consultation (that was analyzed, in a different video material, by the dentist himself, along with the host of the course *The Dental check-up* and *Insight into the dental check-up*), meeting all the existing specialists in the UK system (*Meet the specialists*, *Talking heads*). Besides the listening comprehension exercise itself (that could be checked by the teacher by asking questions that had been previously prepared), out from these activities we could develop all sorts of new ones that could deal with some other aspects and skills of the English language. The first and foremost benefit was that of the listening exercise as we did get to listen to some native speakers. Apart from that, after completing the first target, we could go on developing some speaking activities dealing with cultural training. For example, after having watched such video material as *Meet the specialists*, we could easily turn to developing speaking skills by starting to talk about the resemblances and differences between the UK and the Romanian systems. Undoubtedly that would have also meant practicing cultural training. Our students would have been made to notice differences and consequently their impact upon either system. This is definitely only one example of how listening activities could be used for such purposes. No matter the topic, a teacher familiarized with the Internet searches would find endless possibilities to use such online resources in his / her class.

Speaking activities, in our own experiences, might have been the biggest challenge during the pandemic. Not being able to see all your students on camera, not being heard completely and at the same time by all your audience did create an extra challenge that might have affected the way in which we could carry on such activities. Sometimes students did not have a working mic, so they used to write their answers in chat so everybody could see them. Nonetheless, this was not a permanent thing and some speaking activities were smoothly carried out during online classes. As we could see in the previous example with the listening activities, any activity after all (even working on a grammar exercise) could have led to some conversational minutes and it did work that way many times. Probably the most enjoyable and organized speaking activities in ESP seminars were the ones in which students had mini-presentations on various topics (this activity could be either part of the Academic Writing module when students did have the choice to talk about academic topics or they could be part of some project assignments that had to do with the idea of cultural training). Such activities mainly had in view students' presentations that were followed by discussions with their colleagues. Students also practiced the idea of using PowerPoint presentations that came as a

visual support for their speech, increasing their knowledge on how to combine their narration with visual aids as we usually do in conference presentations.

The reading activities did not change that much during the online classes. The amount of reading materials was uploaded in advance, in students' Class Materials so they could new, before class, what we would talk about. This was definitely a plus, along with the fact that students could now easily download these materials and save them for further reference. The idea was to encourage students to read more, especially during times when we would stay too focussed on screens. Reading is also possible from a screen but it is worth knowing that, for a change, this could also be done from books in hard copy. However, just to make sure students would get to read the text needed in class, besides uploading all the reading materials in advance, teachers could also use the "share screen" function when wanting to use some reading materials. Having the text in front of their eyes might make even the more reluctant students want to see what the text is about. With writing activities we managed to improve the aspect of feedback. Writing activities were still required from the students during the pandemic (let us not forget that, for a while, that was the major task assignment we could require from them in order to grade them). Using Microsoft Teams to deliver our classes, we could easily see the benefits of the application when it came to assignments. Thus, assignments could be created in a special folder where students would upload their homework. Teachers would have the possibility to offer individual feedback to all the students after reading. That was a major beneficial change as compared to the on-site teaching, when such a feedback was very rare.

4. CONCLUSIONS

In terms of assessment and grading, which also were some issues of debate during the pandemic, we can say that the Testportal application provided by Microsoft Teams proved to be very effective in the sense that such tests could still be preserved in the on-site classes, assuming that we are going to still have a professional account on Microsoft Teams. The second semester carried out during the pandemic, i.e. starting with the fall of 2020, meant working with Testportal on a weekly basis. We tested students' involvement and real participation during class by asking them to complete such a weekly test in Testportal. Questions were created by the teacher, based on the information received by students one week before and the test designed based on whatever the teacher considered to be important for each group of students he / she worked with. The configuration options allowed us to set the desired amount of time for each question, to shuffle

questions so that each student would get the same questions in a different order, and to make students receive their results as soon as they finished the test. That was a very effective way to deal with our ESP classes. On the one hand, it made our students want to pay as much attention as possible during class as they wanted to score high (all the tests at the end of the semester were supposed to give some percentage of their final score), and on the other it familiarized them with this kind of tests that they had never taken before. This was a really effective way of dealing with the ESP class had there been any attempts at false participation in class or lack of involvement.

Another issue that may be mentioned in relation to online classes, especially when dealing with Internet resources, is that some foreign language teachers have started to worry about the existence of these unlimited resources of materials that students can go to in order to improve their foreign language competencies. It is true that the pandemic has drastically changed the teaching process as “education is considered the crucial mechanism for developing knowledge and enhancing individuals’ performance, while it has been seriously and adversely reformed by the pandemic” (Tumen et al. 2021). Indeed, today there are many applications that students may use, they can definitely access online resources to improve their knowledge on their own. As foreign language teachers we should not worry about such things. Students may improve such skills on their own, outside the foreign language class, why should we worry about such a thing? We should even encourage them to do that. However, it is important to tell them that it is always good to look for such materials with the proper guidance because, no matter what the Internet offers, the selection of good materials has to be strict. A simple research of such online resources shows the fact that we still need a teacher’s guidance in order to understand all the subtleties of a foreign language, let alone correct mistakes. Nonetheless, future studies that are going to be carried out will show better how this whole pandemic has impacted both teachers and students. Studies will have to address both perspectives in order to reach a more objective point of view. So far studies have shown that “The findings indicated that when teachers have more training, more skills, and more confidence, they could deliver more effective online teaching and learning” (Zou et al. 2021).

Last but not least, we should not forget that we live in the age of Artificial Intelligence (AI). Though many people may be reluctant to the very idea of AI, we should keep in mind that we have to benefit from all the good aspects of technology development. As long as we can find ways to improve our classes and our work with students, we should constantly try to keep ourselves updated and try

to smoothly adapt to these new contexts. Likewise, AI can give us many opportunities to benefit from. Specialists in the field could help us find ways to perfect the testing system (along with the automatic result students get on the test, for instance, based on the performance he / she has, he / she could be automatically indicated some grammar resources that would offer the necessary information that he / she lacked in the test). Based on test results, teachers could receive feedback on what some groups of students need more in terms of information and knowledge. Likewise, following the course attendance (which is not mandatory), teachers could see what topics are more enjoyed by students, progressively trying to get rid of those topics that do not keep the students engaged.

To conclude, we can easily say that despite the inherent challenges that the COVID-19 pandemic has brought on, online teaching did not necessarily mean a decrease of the didactic act, as some have said. Of course it did depend on each and everyone's possibility to adapt and adjust himself / herself to the new context, and the willing to cope in an effective way with the new situation. During the pandemic we adapted our curriculum so that it responded to the new context (for instance, as part of the students' Academic Writing training, we also chose to introduce such new topics as "how to deliver an online presentation" while before the pandemic we only used to talk about "designing an effective presentation"). Guests we used to have in our class every year no longer needed to be there, present on-site, as we could easily organize meetings in Microsoft Teams so as not to lose the tradition of giving our students the opportunity to listen to professionals coming from various fields of interest, with relevance in the medical field (some years before the pandemic we started to focus on the idea of familiarizing our students with the field of medical humanities, and we started to invite guests from the field of arts, such as writers, painters, actors). Once the pandemic started, we did not stop such activities, on the contrary, we increased them as we no longer depended upon the experts' presence in our city or the available number of seats in an auditorium. Therefore we do believe that such meetings should not stop even when the pandemic is over. Due to the development of technology, possibilities are endless nowadays, it just takes a little effort to look for the appropriate materials and methods to make our classes fun and interesting for our students, at the same time providing them with the necessary knowledge and information that will equip them with the proper skills necessary in their future professions.

REFERENCES

- Damayanti, S., Irwan, I. (2021). Online learning in EFL Classroom during Pandemic Covid-19: Teaching Activities, Problems and Solutions. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature* 9 (1): 463–474. Accessed 7. 3. 2023. URL: <<https://ejournal.iainpalopo.ac.id/index.php/ideas/article/view/1911>>.
- Lassoued, Z., Alhendawi, M., Bashitialshaaer, R. (2020). An Exploratory Study of the Obstacles for Achieving Quality in Distance Learning during the Covid-19 Pandemic. *Education Science* 10(9): 232. Accessed 7. 3. 2023. URL: <<https://www.mdpi.com/2227-7102/10/9/232>>.
- Rohmawati, Cucum. (2021). Internet based learning during COVID-19 pandemic in the EFL classroom. *Journal of English Language Teaching and Literature* 4 (2): 28–38.
- Tumen, S., Çelik, V., Kwestan, H. A. (2021). The Impact of Covid-19 pandemic in EFL classes through the lenses of secondary learners. *Shanlax International Journal of Education* 9 (4): 389–406. Accessed 7. 3. 2023. URL: <<https://files.eric.ed.gov/fulltext/EJ1309616.pdf>>.
- Zou, B., Huang, L., Ma, W., Qiu, Y. (2021). Evaluation of the effectiveness of EFL online teaching during the COVID-19 pandemic. *Sage Open* 11 (4): 1–17. Accessed 7. 3. 2023. URL: <<https://journals.sagepub.com/doi/pdf/10.1177/21582440211054491>>.

Лаура Јоана Леон

Универзитет за медицину и фармацију „Григоре Т. Попа”, Јаши, Румунија
Медицински факултет, Катедра за превентивну медицину и интердисциплинарност

ЕФИКАСНОСТ ОНЛАЈН ПРЕДАВАЊА ЕНГЛЕСКОГ ЈЕЗИКА СТРУКЕ ТОКОМ ПАНДЕМИЈЕ КОВИД-19

Резиме

Брзи прелазак на онлајн наставу, проузрокован пандемијом вируса КОВИД-19, довео је до унапређења наставе енглеског језика струке (ЕСЈ – Медицински енглески) на Универзитету за медицину и фармацију „Григоре Т. Попа”, Јаши, Румунија. На поменутом универзитету је већ постојала е-платформа и пре пандемије, што нам је омогућило да брзо и лако пређемо на онлајн наставу у потпуности. Непрестано смо покушавали да уз поштовање стандарда унапредимо наш начин рада и наставне материјале које користимо. Главни изазов са којим смо се суочили био је како да одржимо заинтересованост наших студената за часове енглеског језика. Трудили смо

се да наше курсеве и семинаре модернизујемо и учинимо што занимљивијим. Уз то, било је изузетно важно да током процеса онлајн предавања унапредимо традиционалне вештине (читање, говор, писање и слушање) и пронађемо најадекватније активности за обављање наведених вештина у онлајн окружењу. Активности смо тестирали у онлајн окружењу на платформи коју користимо са студентима. Упркос инхерентним изазовима које је донела пандемија вируса КОВИД-19, онлајн настава није нужно значила смањење дидактичког концепта који су професори замислили, као што се то покушава доказати данас. Наравно, све зависи од могућности сваког учесника овог процеса да се прилагоди новом контексту и спремности да се на ефикасан начин носи са новонасталом ситуацијом.

Кључне речи: енглески језик струке, онлајн настава, студенти медицине, пандемија КОВИД-19, онлајн ресурси, вештачка интелигенција, читање, говор, писање, слушање.

Received: 11. 7. 2022.
Accepted: 19. 12. 2022.

