

Review research paper

DESIGNING AN ESP COURSE FOR THE 21ST CENTURY STUDENTS: THE CLASH OF THE DIGITAL IMMIGRANTS AND NATIVES

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Abstract. *How do teachers design an ESP syllabus for the students born and raised with technology? Are we prepared for the students arriving at universities with new ways of thinking and consuming information? Is it time for us to rethink and re-examine the way we create our syllabi? The ESP course for Computer Science students taught at the South East European University (SEEU) in Macedonia is designed according to students' needs and it includes a number of 21st century skills. Twenty first century skills are 12 abilities that today's students need to succeed in their careers during the Information Age. Upon successful completion of the course, students are expected to be able to use the language that they will acquire and practice throughout the course, integrating the four main language elements and skills towards fulfilling their academic needs as well as their occupational needs for their future careers. The idea of this paper is to show whether the author, being a digital immigrant herself, has succeed in creating an engaging and motivating syllabus for the digital natives. It will also cover some aspects of the online teaching during the COVID-19 pandemic. As it will be demonstrated in the paper, letting students have a say in the design of the syllabus proved to be beneficial for both parties.*

Key words: *ESP, syllabus design, digital natives, 21st century skills*

1. INTRODUCTION

How do teachers design an ESP syllabus for the students born and raised with technology? Are we prepared for the students arriving at universities with new ways of thinking and consuming information? Is it time for us to rethink and re-examine the way we create our syllabi? The new learning opportunities offer students vast information and infinite access to authentic resources. Students, on the other side, lack the necessary knowledge and skills to use that information. Instructors should bear this in mind when creating modern and contemporary syllabus that reflects the digital environment where students spend most of their time.

Can their 'natural' digital environment be transferred into the academic context? And can that transfer be successful? The author of this paper strongly believes so. However,

Submitted September 13th, 2020, accepted for publication November 3rd, 2020

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instructors need to realize that the sole moving of lectures into a digital (online) environment does not necessarily mean effective and efficient learning. The challenge is to systematically embed both modes of delivery by identifying the values of face-to-face instruction and digital instruction. They should also be able to recognize what way of teaching is more convenient for the students and can be done better in a different environment. Finally, they should be able to combine the two modes of delivery in order to get better learning outcomes.

On the other hand, the academic year 2020 has faced a new challenge that went beyond just simply adjusting the syllabi for the learning styles of the new generations. The pandemic COVID-19 situation has changed the face of education worldwide. The situation has forced the universities and all other educational institutions to replace traditional face-to-face study programs with online courses. The transition happened in a short period of time with no actual preparation on the side of the instructors. The shift from physical classrooms to online classrooms happened overnight with instructors shifting their pedagogical approach and adapting to the new situation. During this period, the main concern was not about whether online teaching–learning methods can provide quality education, but how academic institutions will be able to implement online learning in a substantial manner (Carey, 2020).

Online learning may be a cost-effective and flexible alternative to classroom learning, but if not implemented properly it may be a waste of time and money. Arsham (2015) points out that online teaching and learning are not connected to a fixed time or space. Therefore, online learning is regarded as a practical alternative to classroom learning that is fixed. Online courses can also create interactive learning environment where students and instructors interact, exchange ideas, discuss course related topics and initiate new discussions. According to Arsham, in a successful online discussion, students build on one another's perspectives to get deeper understanding of the topics in the same way they do in in-person discussion. In both types of discussion, the point is to understand the material from different standpoints.

Teachers of the future will perform the very same functions they do now, in terms of planning and evaluation, but will make use of technology to give students a richer, more stimulating learning environment. But teachers will find that, as computers become new tools, the technology demands new kinds of student-teacher relations. Students must become more autonomous, active learners, and so teachers must hand over some of their power and authority—not to the computer, but to the students themselves (Hanson-Smith, 1997, p. 3). For instance, Sottilo (2000) notes that in the hands of professors who know what they are doing, online instruction is superior to face-to-face instruction.

Based on the curriculum requirements, the English for Specific Purposes (ESP) courses described in this paper have to address students' needs in today's digital world. The findings in this paper suggest that the use of online mode of course delivery can create high level of student engagement and increase their motivation to learn English. The paper describes the ways in which student learning can be more active and accessible in an online learning environment and suggests various assessment tools for achieving that task. It also attempts to understand the importance of online learning in the period of a crisis and pandemics such as the Covid-19.

2. LITERATURE REVIEW

Since the early decades of this century, distance or virtual education has become an increasingly common alternative to classroom-based learning. Although digital education may provide an excellent opportunity to access education, this method is not ideal for everyone. According to Richardson, teachers must “incorporate technology as seamlessly as possible. The technology is the means, not the content of the presentation. It should not overwhelm the lesson, but enhance it. If a non-technology-based means of presentation would be more effective, then by all means use it. The simplest, most intriguing tool to impart instruction is the best tool. Paper and pencil can sometimes be more effective than computer equipment - and paper does not crash! (Khampusaen 2004, p. 14).” According to Khampusaen (2014), many academic professionals have been looking for the answer to whether foreign languages can and should be taught online (p. 90). However, teachers are still the most important factor in online teaching. He further indicates that social learning environment can significantly increase teachers-students’ engagement (p. 91).

As a result, in the recent years an increased number of universities offer online studies and online courses, guided by the idea that students born in a digital age may find in-person learning less contemporary and demotivating. But, is this really true? To answer this question, Prensky (2001) published his paper on a new generation of students. Prensky (2001) coined the term “Digital Natives” to point out towards the theoretical affinity and digital literacy of the new generation. But on the other hand, Prensky also referred to the lack of digital literacy among educators by naming them “Digital Immigrants”. The term refers to the educators being outsiders in the land of the digital natives. He indicates that there is a discrepancy between the natives and the immigrants regarding the education process. The teaching practice of the immigrants is not compatible with the natives’ skills and preferences.

However, according to Kennedy (2008), the arguments used to support these opinions need closer examination before university educators start changing curricula and learning practices (p. 9). These arguments are established on a hypothesis that all the students coming to universities have the same digital background and educational experience. This implies that students coming to universities are all digital natives and they all have more or less consistent technological experiences. Moreover, these students are believed to have advanced knowledge and understanding of technology. But this generalization hinders the objective point of view regarding students’ technological skills, knowledge and preferences.

Online learning increases flexibility of access, eliminates geographical barriers, and improves convenience of use and effectiveness of collaborative learning. Learners’ intention to use e-learning is influenced by perceived usefulness and self-efficacy (Liaw, 2008; Liaw, Huang, & Chen, 2007). Furthermore, some studies also indicate that students tend to perform better in an online learning environment than in a conventional classroom instruction (Yusuf & Afolabi, 2010). According to Dashestani and Stojkovic (2015) it is very important for ESP teachers to develop a variety of strategies for using technology in the classroom. Through the use of diversity of methodologies and strategies the instructor can increase students’ motivation and their engagement in the learning process. However, without having a clear understanding of the benefits and weaknesses of each technology, its integration in ESP instruction would not be a wise approach. Furthermore, the question of developing new, digital kind of literacy among students arises. Defining the digital literacy needed for reading in digital environments has been challenging, with many terms proposed by

researchers including “multiliteracies”, which suggests that meaning occurs in settings where written text is part of visual, audio, and spatial patterns of meaning (Cope & Kalantzis, 2000, as cited in Richardson et. al, 2012, p. 297), and “new literacies”, which focuses on the skills and strategies necessary to work with rapidly changing ICTs (Leu, 2002; Leu, Kinzer, Coiro, & Carrmack, 2004, as cited in Richardson et.al, 2012, p. 297).

Representatives at the 21st Century Literacy Summit (2005) used the following definition of literacy to guide their work: “*21st century literacy is the set of abilities and skills where aural, visual and digital literacy overlap. These include the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms*” (as cited in Richardson et al., 2012, p. 297). Expectations for readers now include being information literate, meaning, being able to find and use information in any paper or electronic form and being critically literate. Students should be able to analyze information to determine various meanings and connotations. Students are also expected to analyze information for relevance, accuracy, and authenticity and synthesize content from multiple sources (Castek, Coiro, Hartman, Henry, Leu, & Zawilinski, 2007, as cited in Richardson et al., 2012, p. 297).

Having in mind the researches done in the field of ESP teaching and online instruction, the author of the paper tried to create an engaging and motivating syllabus for her ESP students. What follows is her attempt to bring closer the worlds of the digital immigrants and natives in the online classroom where students have many opportunities for self-directed and autonomous learning.

3. SYLLABUS ADAPTATION FOR ONLINE TEACHING

Motivation is one of the most important factors when it comes to learning a second language and especially learning that language in school. “Motivation is the driving force behind the energy required to complete a task, a lack of motivation will give rise to a lack of driving power behind completing a certain task” (Nugent, 2013). Unfortunately, there is not a universal way to achieve motivating students to fully learn the language because the techniques that work in certain conditions with certain students do not necessarily give the same results in other conditions. The sources of motivation are either internal or external. For an effective learning of a second language it is necessary to pay equal attention to both motivational sources. The ultimate goal for every language teacher is to have motivated, challenge-driven, ready to learn students. Unfortunately, in numerous occasions, the worlds of the teachers and the students collide. Those are the worlds of Prensky’s (2001) digital immigrants and digital natives.

Motivation is closely related to self-driven and autonomous learning. And, on the other hand, autonomy can be a by-product of the digital learning. The concept of learner autonomy emphasizes the role of the learner rather than the role of the teacher. Learner autonomy focuses on the process rather than the product and according to Jacobs & Farell (2001), it supports learners in further developing their own learning objectives and perceiving learning as a lifelong process. According to Hafner and Miller (2011), learner autonomy is often mistakenly associated solely with independent out-of-class learning in which learners are in control of all aspects of their learning process. However, learner autonomy can also develop in the structured learning environment of the classroom and become part of the pedagogical objectives of a language course (p. 69). Furthermore, they

state that we have now entered a digital age which is characterized by widespread participation in globalized, online spaces which offer rich opportunities for informal, self-directed learning. In this sense, language educators may draw upon the architecture of such spaces in order to design opportunities for autonomous learning in formal contexts (p. 86).

Students from all faculties at South East European University (SEEU) in Macedonia (except for the Department of English Language and Literature) are required to complete English language courses specialized to their field. Students generally begin these courses during the third semester. The Language Center (LC) provides the syllabus, materials, and the instructors for these courses. The English for Specific Purposes for Computer Science 1 and 2 courses are two semester courses which include four class hours per week. The number of credits awarded is 6 (six). The full length of the course is 15 weeks per semester and they are designed according to students' needs and interests. The courses focus on the four main language skills: reading, writing, listening and speaking. Furthermore, the emphasis of the courses is on acquiring and enhancing students' vocabulary and language skills, critical thinking skills and job hunting skills as one of the most important 21st century skills. Upon successful completion of the course, students are able to use the language that they will acquire and practice throughout the course, integrating the four main language elements towards fulfilling their academic needs as well as their occupational needs for their future careers. Thus, they:

- will know how to job hunt,
- will learn how to deliver a speech,
- will think critically,
- will appreciate opposing points of view.

During the COVID-19 pandemic the education worldwide has undergone great changes. The pandemic has changed the face of the education forever. Students had to adapt to the new ways of learning and teachers had to adapt to the new modes of teaching. Luckily, our University had already established a solid Learning Management System (LMS) that has been used for many years and it constantly upgraded. Throughout the years we had used different LMSs – Angel (developed with Indiana University, USA), LIBRI (SEEU's developed LMS) and Google Classroom as the latest. In addition, starting from the academic 2018 the last two teaching weeks in January were entirely transferred online. However, there was still an immediate need of adapting approaches and syllabi in order to deliver quality education as a response to COVID-19. The syllabi for ESP 1 and 2 included a variety of different approaches and techniques for learning and assessment including: website evaluations, CV/cover letter, informative 'explore a topic' presentations, discussion forums, mock job interviews, persuasive speech, online debate and online quizzes.

Listed below are few of the author's attempts to alter the learning and teaching aspect of ESP and design syllabi which are both challenging and interesting and reflect the new 'normal' in education.

3.1. ESP 1 and 2 overview

The author of this study used the five guidelines described below by Egbert (2005, p. 7) to design her study of implementing Computer Assisted Language Learning (CALL) in the classroom. Here they are presented in the way they were used in these courses to create an online learning environment:

1. *Use technology to support the pedagogical goals of the class and curriculum* – The researcher designed the technology around the learning goals, not simply as a way to use technology but as a way to enhance learning with technology.
2. *Use the technology as a tool* – The technology was not the goal but a support system for learning.
3. *Use technology effectively* - The technology was selected because it was effective.
4. *Use technology efficiently* - The technology was selected because it was efficient.

The abovementioned guidelines postulated by Egbert are used as signposts for implementing online learning in these particular ESP classes. They ideally describe what the main use of technology should be in the classroom and should be used as underlying principles for creating digital (online) learning environment. As it will be shown further in the paper, students considered online activities to be an effective and efficient way to learn the course content. The effectiveness of the assignments was validated through the use of different online tasks that were used throughout the semester and that were highly rated by the students. The efficiency was indicated by students' responses that they were able to learn the course content at their own pace.

Given below are the screenshots of the ESP 1 and 2 courses as they were delivered on Google Classroom. There are numerous materials and assessment tasks posted there that are divided according to the specific topic which was covered throughout the semester.

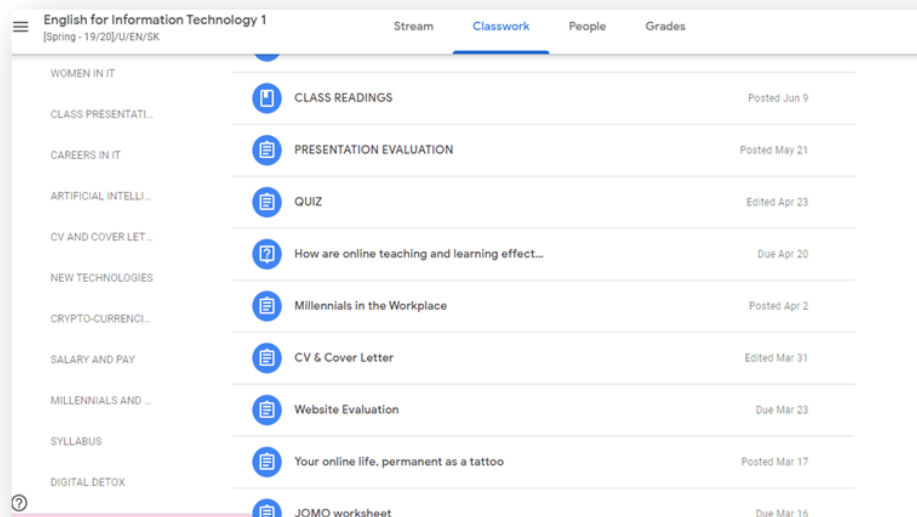


Fig. 1 ESP 1 overview on GC

As it can be seen from the picture, the ESP 1 course covered a variety of interesting topics for the students to discover. The autonomous learning was enhanced by the different assessment tasks followed by peer and self-evaluations. Help and assistance was provided when needed, without waiting for the class or the office hours. Students discovered that they appreciated the immediate feedback received online, whereas in a classroom, maybe not everyone would get immediate feedback. Further, the feedback

online can give students a better chance to think about a criticism and have time to make adjustments that may not happen in the classroom.

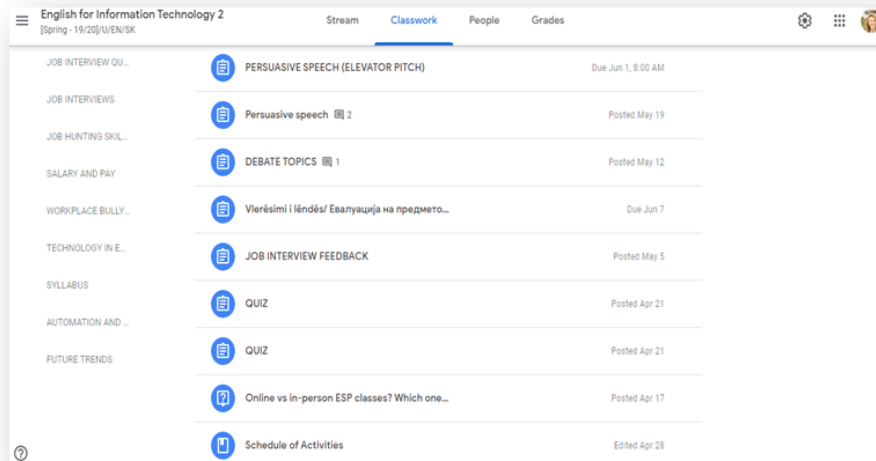


Fig. 2 ESP 2 overview on GC

The digital world is ever-changing and dynamic, new digital devices and applications are designed and new ways to use those devices occur. Nevertheless, this study recognizes how adept today's students are with digital tools and whether they would prefer to use these tools also in their learning. Students reacted positively to the digital tasks that were created for the courses and found them useful in their learning. Additionally, these tasks can be further adapted by instructors to introduce more digital tasks in their EFL/ESP classrooms even when the pandemic is finished. By applying the study's recommendations, instructors can offer to their students a much more fulfilling course of study, one which respects the students' world of digital devices and tools.

Below is a representation of some of the teaching tools that have been used in the ESP classes described in this paper. The tools cover a variety of learning materials that were adapted and adjusted for learning in an online environment. Further below, a short description of some of the tools will be given.

3.2. Online class debate

Debates have already been proven to be an effective tool in teaching English. This proved to be correct for this particular ESP 2 class as well. According to students' poll at the end of the semester, the online debate was the most effective assignment. Some students stated that they liked the direct interaction they had with their peers. For others it was the exchange of ideas during the debate that prevailed in making the choice among the other assignments.

Given below is the poll distributed among the students in which they need to decide on the topic for the debate. The topics were proposed by the students, thus providing

them with an opportunity to be responsible for their own research and have a say in what will be discussed about in the online class.

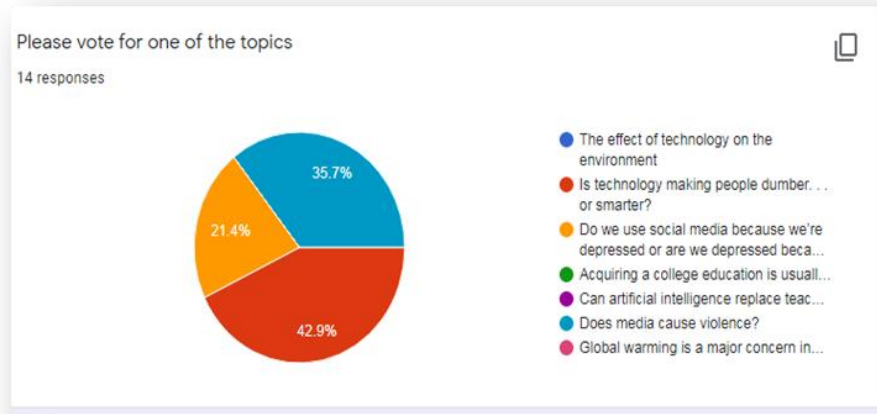


Fig. 3 Debate topics

Presented below are the rules and the guidelines according to which the online debate was organized. Having strict rules enables the effectiveness and the efficacy of the online debate and provides students with enough time to present their case to the class. The effectiveness of the class debate has shown that even in an online environment there can still be a social interaction, something that students highly appreciate.

CLASS DEBATE

⋮

Daniela Qirovska-Simjanoska · May 15

Dear students,

The following two topics have been chosen for the class debate:

1. Is technology making people dumber or smarter?
2. Does media cause violence?

On Tuesday we can agree on one of these two topics and we'll decide on the pro/con teams. Meanwhile, read the article about the general rules of a class debate. It has some very nice points, plus a list of useful debate vocabulary. We are not going to strictly follow the debate rules, because given the circumstances it's impossible to do so. However, basic rules will apply:

- the affirmative group receives one minute to present their case to the audience (each member of the group)
- the negative group then receives one minute to present their case (each member of the group)

- The order of the speeches:

A1 = first student of the affirmative team
O1 = first student of the opposing team
A2 = second student of the affirmative team
O2 = second student of the opposing team, etc.

- after both sides have a chance to speak, both teams receive two minutes to prepare a rebuttal and summary. The order of speech is reversed now and the negative side presents their rebuttal and summary for the first two minutes.
- the last to speak is the affirmative team who then presents their rebuttal and summary for two minutes.

You'll find additional information on this in the attached article.

Fig. 4 Debate rules

3.3. Discussion forum on Google Classroom

Tajeddin & Alemi (2012) point out that the use of online discussion forums motivates ESP students to use interactional meta-discourse markers. These meta-markers are important element of online discussion forums. By using the meta-discourse markers students show how their ideas are connected to each other, they present their ideas and take a stance and they improve their academic writing skills.

In order for the discussion forum to be successful, the instructor made sure that her online presence is corresponding to the class presence, making the digital learning environment as interactive as possible. Students realized that they could ‘talk’ to the instructor and other students in an online environment, perhaps in a way similar to a chat on Facebook/Snapchat. Not only students, but also instructors, should realize that social interaction means something quite different today than ten years ago.

The next picture shows how the discussion forum thread looked:

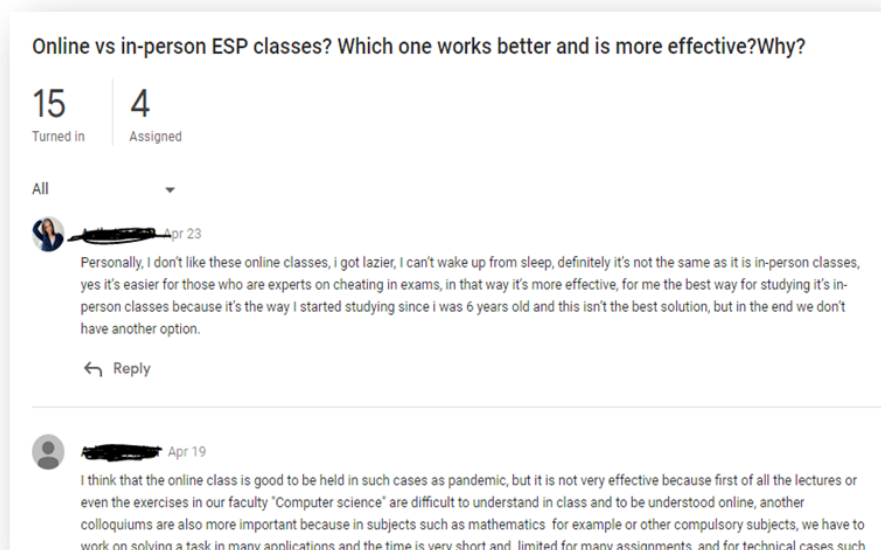


Fig. 5 Discussion forum

Having responses from students on the current situation provided a valuable insight into their opinions as well as their understanding of the content and the language knowledge. This made them more engaged and helped instructor tailor the next activities and lessons to suit students' level of understanding of concepts.

3.4 Persuasive speech (elevator pitch)

For this assignment students were supposed to imagine themselves being start-up owners. They have an idea/product, but need investment to further work on developing the idea. They had to shortly (30-60 sec) describe the idea/product to a potential investor. In order to do that, they were required to record themselves giving the short

presentation using persuasive speech to persuade and sell their idea. The students were given the chance to choose either to record themselves or have this task as a writing part in the final exam. Given below is the result of their voting:

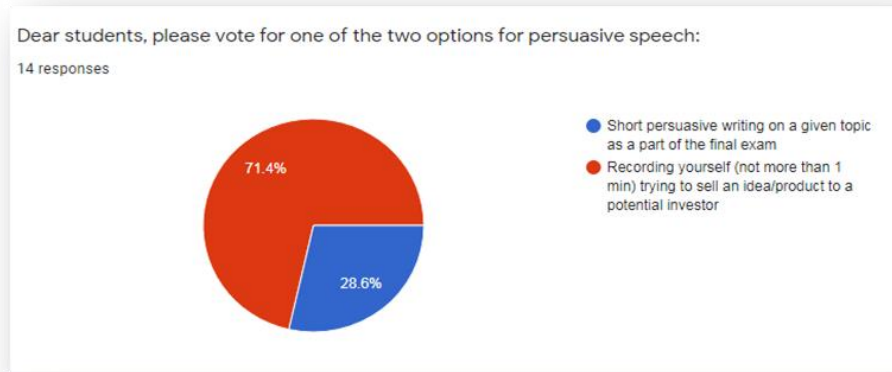


Fig. 6 Persuasive speech voting

The persuasive speech proved to be a very successful and challenging task for the students. It received positive reactions in the students' evaluation survey which will be addressed in the next section. Students enjoyed watching their colleagues' videos and share their real-time feedback.

As the paper demonstrated, there is an abundance of online tools that can be used to create an effective and efficient learning environment. Instructors can use various videos, audios, texts, to reach out to their students and make their learning valuable. The strongest point of the online learning is the fact that it is student-centered and offers flexibility in terms of time and space. When utilized correctly, it can be superior to face-to-face instruction.

4. THE STUDENTS' EXPERIENCE

Towards the end of the semester, students' evaluations are administered throughout the faculties and centers. The evaluations are done online through GC and include 16 statements that cover the materials used in class, the course content, the instructor's role and the students' role as well. Due to the pandemic, the students' evaluations were shortened to 8 questions only and they served as an instrument for measuring the quality of online teaching at SEEU. The students tick the answer on questions 1-6 that best explains their opinion on a Lickert scale from Strongly agree (SA), Agree (A), Neutral (N), Disagree (D) to Strongly disagree (SD). Students respond to questions 7-8 by using 5 point scale, from excellent (5) to poor (1). At the end they are required to provide suggestions for further improvement of the course/instructor or comment on any relevant questions regarding the course. This activity is managed through University's e-Learning Center and it is completely anonymous.

Given below is the student evaluation survey:

Instructions: Tick the answer that best explains your opinion: SA (strongly agree), A (agree), N (neutral), D (disagree); SD (strongly disagree)

Course/instructor:

1. The course materials posted online (topics, lectures, videos, etc.) were well organized and user friendly (easy to follow). SA A N D SD
2. The information and instructions by the instructor for following the course through the GC platform were clear.
3. The selection of materials and tasks on GC was relevant and appropriate for reaching the course objectives.
4. The instructor used the opportunities for online interaction with students (discussions, chats, assignments, etc.)
5. The assessment (mid-term exam, assignments, quizzes, projects, etc.) was well organized and appropriately reflected the syllabus.
6. The instructor provided regular feedback on the given assignments.

Summary statements

Please respond to questions 7 and 8 using a 5 point scale, from excellent (5) to poor (1).

7. Overall course content rating 5 4 3 2 1
8. Overall instructor rating

Please provide any comment or suggestion related to the course.

After examining students' answers at the end, the most interesting conclusion was that they reported that the greatest disadvantage of learning in an online environment was their inability to fully concentrate while being online. This is a challenge in the digital world, as often is reported in studies. The generation of the digital natives is constantly moving from one resource to the other, imagining that multi-tasking is really possible. Many recent studies have shown that multi-tasking is not really possible and leads to errors and distraction. It has been proven that it is impossible for the brain to process more than one string of information at a time. That is the reason why students believe they can do many tasks at once, when actually lot of information is slowing them down. An important part of instruction in any classroom today is to demonstrate to learners that they must manage their time efficiently and concentrate on one task at a time.

Overall, students indicated that they felt more motivated when learning in a digital environment. This is most likely because students 'feel at home' in the digital world. They do not have to move to a desk and chair but can stay in the comfortable zone they are used to. Students' motivation was connected to the tasks they were assigned to do. The more challenging task led to more increased motivation. The obvious conclusion is that instructors should think carefully about how to motivate a digital learner by creating challenging tasks that can be accomplished in a comfortable zone or space they are used to.

5. RECOMMENDATIONS FOR THE FUTURE

This paper recognizes the value and the potential of technology and the way it is and will continue to reshape the educational landscape. Based on the course outcomes and students' opinions, it makes the following recommendations:

- Instructors - Creating an effective learning environment that is not constrained to classroom walls is not a simple task. But, once done, it will prove to be very beneficial for the students and the instructors as well. Technology can connect students to each other and to different students worldwide more easily, providing a setting for exchange of ideas and experiences. Some of the learning activities will

still best be done in the classroom, but there is a great potential in turning the outside world in a learning place. One of the most positive characteristics of technology is fast and easy access to information. Getting information quickly means saving time for other things. If planned appropriately, in-person and digital learning could lead to less time-consuming tasks, such as long explanations, writing on the board, checking homework and grading. In such cases technology is of great assistance, not only to the students but also to instructors.

Instructors need to: start using some familiar technological tools as an integrated part of their course, provide support and encourage students to use those tools, stimulate students' interests and work on developing their 21st century skills.

- Students - They should furthermore develop their digital skills and thus become more competitive on the labour market. They should acknowledge the idea that learning happens everywhere and lasts for a lifetime, hence prepare themselves for lifelong learning.
- Higher education institutions - By having information always accessible and at hand, teaching and learning will inevitably change. Higher education institutions should embrace that change first by offering contemporary courses that incorporate technology, and then by making resources available to students everywhere. Higher education institutions should prepare for the future to come by providing innovative models for education with technology at its core.

The proposed recommendations in this study can be used for developing a contemporary syllabus for teaching ESP that will be based on students' preferences for learning environments (in-person or online). Such a syllabus will be responsive to students' learning needs and their learning expectations. English learning syllabi need to continuously respond to change, because language is reshaping and evolving together with technology.

6. CONCLUSION

This study included designing a series of digital tasks for the students to use in an online class. The digital world is ever-changing and dynamic, new digital devices and applications are designed and new ways to use those devices occur. Students reacted positively to the digital tasks that were created for this study and found them useful in their learning. By applying the study's recommendations, instructors can offer to their students a much more fulfilling course of study, one which respects the students' world of digital devices. Better students' performance is a combination of technology, students' control of learning and their learning objectives, and does not happen because of the type of instruction per se, as this paper has shown.

Technology is inevitably connected to the teaching/learning process. It helps instructors but at the same time, technology transfers some responsibility for learning to students. Students can guide their learning at their own pace, direct their progress and have access to course content by participating in an online learning. Technology can provide the tools for independent organization of the learning process. In such environment, students who use technology become active users, not just passive information receivers (EDC, 2011). For that purpose, students need to use different technological tools in the classroom. Hamilton (2007) indicates that by limiting the classroom to one technological tool the most important element of integration is eliminated. The learning becomes valid and genuine only by

combining the technology of today with life skills students will need in the future. The pandemic situation that we faced has also taught us that students must possess certain skills such as skills of problem-solving, critical thinking, flexibility, information and technology literacy, as the most important ones. Educational institutions must systematically embed these skills in their courses thus making students more competitive and prepared for the outside world.

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