

## **Online education in Ukraine in extreme conditions: constraints and challenges**

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### **Abstract**

This paper studies the short-term impact of full-scale invasion and military actions on students receiving ESL education in Ukraine. Our focus is on an online ongoing learning process in which students are involved and mostly distracted from gaining education due to extreme conditions. The study examined how the ongoing war affected the online learning experience of Ukrainian students at Ternopil National Pedagogical University through a survey and questionnaire. SWOT matrix has been used to reveal the weaknesses, strengths, opportunities and threats of learning in wartime. Studies have shown that students are willing to continue their education even during wartime to obtain a qualification. Students often struggle with motivation and social, living, and technical distractions that impact academic performance. The findings suggest that the online tools employed in teaching and learning are sufficient for meeting the fundamental requirements for developing English as a Second Language (ESL) proficiency and fostering student autonomy. The participants expressed an interest in exploring the potential of a combined (online and offline) learning approach, provided the current situation allows it. The study suggests that instructors should personalise and differentiate learning by creating individual schedules, reducing the number of tasks for assessment, and allowing more flexibility in shifting deadlines. Ukrainian students have recognized the benefits of online learning, relaxed teacher attitudes, and effective class organization during wartime.

*Keywords:* extreme learning, learner autonomy, learner-centred approach, SWOT matrix, ESL learning, online education

### **Introduction**

Russian war is “an attempt to seize territory from Ukraine and thwart its independent, democratic trajectory”, providing serious challenges and repercussions for Ukrainian society (EU official statement). The sphere of education is not the exception. This conflict is seriously impeding teaching and learning, and we can no longer overlook the consequences. In the highly charged setting, young and mature Ukrainian students have started a new academic year at educational institutions, and many before wondered whether returning to schools and universities even made sense given so much uncertainty. An analysis of the relationship between education and military actions is conducted amidst intense regional political conflicts. Many concerns that arose about the learning process in different types of conflicts in the past

remain up-to-date in the current situation in Ukraine. The importance of educational opportunities and their quality is under scrutiny as these issues are relevant for educational communities and democratic societies. The most important question to start the study first is, ‘Even if we should happen not to be interrupted by death or military service, why should we – indeed how we can – continue to take an interest in these placid occupations when the lives of our friends and the sovereignty of your own country are in the balance?’ The issue is left open to answer at any time and place where the war occurs (Lewis, 1939).

## Theoretical Framework

Extensive scientific coverage has been given to examining teaching and learning amidst violent political turmoil (Pavneva & Edmunds, 2020; Ameridze et al., 2022; Abduh, 2021) as well as to obscure the complexity of the relationship between education and war (Kharzhevskaya, 2022; Ryzhiy, 2022; Marienko & Sukhikh, 2022; Fedorenko, 2022). Scholars replace outdated views on wartime education with innovative ideas. For instance, some researchers have been studying war schooling models to assist those countries that inevitably are engaged in war conflicts (Nkata, 2010); they keep discussing the education rights of children during war and armed conflicts (Manuchehr, 2011); and the consequences of unnecessary wars on education systems (Nelles, 2005). However, these studies pay more attention to the problems of schooling in wartime, yet they did not point out how students/adults at universities have to deal with difficulties of asynchronous, online, far too detached learning processes and extreme living and technical conditions in wartime. Are students sufficiently motivated and encouraged to study in wartime? What are the advantages of being engaged in the learning process under the considerable pressure of war conflict? Is it possible to study autonomously and successfully simultaneously? The article examines the challenges of studying English as a second language during wartime and considers solutions to maintain high-quality learning.

According to this, the research aims to investigate the purposes and forms of educational objectives in wartime; to find out the war outcomes on the ESL learning process and its members, taking into account living, social and psychological conditions of Ukrainian students and examine the participants’ perceptions on tools and ways of keeping online ongoing learning process in wartime.

All of the aforementioned notices demonstrate the depth and complexity of this research on the interconnections between education, particularly ESL learning, and war. They also pave the way for future scientific research. Furthermore, defining the main challenges and constraints in language education in wartime may help teachers and students to facilitate language education and give a quick response to urgent questions raised at present time in such terrible conditions, as the situation changes rapidly in the course of the war. Therefore, this research study aims to achieve the following objectives: 1) discover the concept of extreme learning and its forms of implementation in the education process in the course of the war; 2) specify the main constraints and challenges of ESL learning in wartime; 3) reveal the correlation of learner autonomy approach to the ESL learning process in wartime; 4) create the SWOT matrix to evaluate war online learning setting by outlining the internal and external conditions of the current education system; 5) analyze the students’ perceptions of the issues of ESL learning process in wartime.

## Literature review

**Online and extreme learning.** Under the threat of new COVID waves and the impossibility of continuing full-time studies, higher education institutions were forced to find opportunities to continue education in a different, safer format. Because online platforms are

increasingly gaining popularity for personal improvement of professional skills (e.g., Coursera, EdEra), educational institutions have also implemented online learning (Pavneva & Edmunds, 2020) with essential changes in curricula and course syllabi.

Bonk proposed the concept of “*extreme learning*”, in which modern technologies are used for educational purposes in atypical, non-traditional, and even threatening conditions (Zhang et al., 2020). The e-project on extreme learning comprises 18 members from across the globe, including Curt Bonk, Abdullah Altuwaijri, Husa Alangari, Eulho Jung, Minkyong Kim, Sahoong Kim, Xiaojing Kou, and Justin Whiting, among others. Professors have advanced their investigation and expanded the notion of extreme learning which now may be defined as:

- 1) “learning with technology when in various locations, 2) interactive learning activities when visiting a local company, or working in a war zone, 3) mobile or interactive learning experiences such as in a museum, or auditorium, 4) being enrolled in a virtual school or university or have taken an online class, 5) use free and open educational resources or an online learning portal, 6) earning when in virtual worlds or online communities, 7) participating in social media, engaging in Webcam experiences or videoconferences with people in other locations, text messaging with learners or experts in other countries, and using mobile devices to solve a problem when in a remote area, 8) learning a language online individually or with others around the world, 9) involving very casual and common informal learning experiences such as using YouTube or British Council/National Geographic to look up needed information” (Bonk, 2012, p. 159).

Thus, technologies started to shape the social landscape and facilitate the creation of a new educational environment with more learner autonomy (Fadda, 2019). Moreover, technologies have been a way to reach every member of the educational process during the challenging period (Jang & Choi, 2020).

The educational sphere and its transition to online mode was not always an easy and good example (Wotto, 2020). Teachers are experiencing stress due to the lack of preparation and the need to constantly teach virtually. Students had few learning online materials and a poor learning environment. The experience of the University of Alcalá, Spain licensed Black Board (BB) app to solve the problem, focusing on oral communicative skills and comfortable speaking while being online (Penalver & Laborda, 2021).

The BB platform was successfully implemented at Najran University in Saudi Arabia. Abduh’s research focuses on the weakest issue of online learning - assessment. Thus, EFL teachers have identified the most relevant types of assessment - peer review, well-instructed projects, a variety of subjective questions, diagnostic tests of multiple choice, e-portfolios, individual activities and online discussions (Abduh, 2021).

Starting from 2020 all educational institutions of the world have adapted to online learning in the COVID conditions, taking into account the peculiarities of the sociocultural context. In the period when the world learned to combat the disease and its challenges, schools and universities have transitioned to blended and then in-person learning again. While the world is slowly recovering from the pandemic, Ukraine is forced to keep being online because of the war. Despite airstrikes, bombings and displacement of students, the educational process continues. Since the COVID-19 pandemic, the social and emotional backgrounds, as well as the studying conditions of Ukrainians have undergone significant changes.

Ukrainian experts recommend utilizing a variety of training formats, including synchronous, asynchronous, and diachronous (Marienko, 2022). Synchronous mode provides the ability to connect to pre-planned events and access video conference recordings on platforms at any time (Kurysh, 2021).

Being an inevitable part of everyday life since February 24, 2022, anxiety states and panic attacks are the preconditions for changing the types of tasks to more creative, dialogic ones, leaving alone merely instructional. Adding online games allows students to release positive emotions and avoid focusing on the negative emotions caused by the war. In addition, within the necessity to analyze foreign media publications critically, a media literacy course is implemented in the curricula. Formation of an active civic and volunteer position will also allow students to feel as active members of society (Kharzhevskaya, 2022).

Students are followed by PTSD states accompanied by panic reactions, loss of memory and concentration, psychomotor agitation, aggression, a sense of terror and helplessness. To enhance the learning process, it is worthwhile to provide more positive feedback, break down information into smaller parts, and underscore the importance of ongoing education to develop professional language proficiency (Ryzhiy, 2022).

Another urgent need is to communicate on equal 'teacher-student' parts about the situation in the country and recent events during classes, listening to expert opinions and interviews, involving military vocabulary use so that students can comprehend properly foreign publications and be reliable and trustworthy sources of information on their own for international colleagues (Fedorenko, 2022).

On the other hand, a study by Ameridze et al. found that students are not willing to communicate and discuss the war during classes. In this case, teachers should demonstrate empathy and tolerance. They should emphasize that professional qualifications can be acquired regardless of martial law by following flexible schedules and deadlines.

**Learner-centered teaching and learner autonomy in wartime.** The view that the concept of learner autonomy is a dynamic construct provides the ground for this research. According to Benson, "Autonomy is a complex, multidimensional, and variably manifested notion in the form of autonomous language learning, which refers to learning practices involving learners' control over aspects of their learning or, more broadly, learning that takes place outside the context of formal instruction" (Benson, 2013, p. 840). The challenge for the future is, perhaps, to move beyond these essentially theoretical premises towards an empirically well-founded understanding of how the ideas of learner autonomy and its potential vary according to different factors, such as social and psychological context and setting.

Learner autonomy was initially defined as "the ability on the part of the learner to take charge of own learning" (Holec, 1981, p. 20). Ellie Boyadzhieva implies that "the learners have the freedom to plan and control their learning by choosing what, when and how to learn in compliance with their own needs, interests and abilities" (Boyadzhieva, 2016, p. 37). A great number of publications and books devoted to the problem of learner autonomy have been inspired by pedagogical experiments, practical applications, the proliferation of new self-access learning centres and up-to-date theoretical implications (Blidi, 2017; Chik et al., 2018; Pawlak et al., (2017); Smith, 2015; Yagcioglu, 2015; Tseng et al., 2020).

Due to wartime, students and teachers have had to adjust to a new online learning environment where learner autonomy has significantly evolved to adapt to the changing landscape of language learning and use (Benson, 2013). Learner autonomy works in the classroom where collaboration, the matter of choice, flexibility, adaptability and awareness prevail, as well as outside the classroom with self-access, self-instructions, distance learning, CALL (computer-assisted language learning), Internet, etc. The concepts and ideas of learner autonomy work in wartime, yet they acquire new meanings and interpretations.

War is forcing Ukrainian students to resort to extreme measures to gain knowledge. In Ukraine, students study online but face challenges such as frequent blackouts, unstable internet connection, high anxiety, and poor living conditions. Many students are choosing to develop learner autonomy, which involves becoming more independent in their learning. This can be

achieved through two main approaches: resource-based practices and technology-based practices (Benson, 2007).

Resource-based approaches emphasize learners' independent interaction with learning materials where self-access and self-instruction prevail (Smith, 2015). In times of war, Ukrainian educators develop self-directed learning materials for students. The constant distractions mentioned above make a learner-centred approach with autonomy practices necessary and efficient. Students can create self-assessment tasks, allocate time for completion, and integrate their learning process with suggested teacher activities.

Technology-based approaches emphasize independent interaction with educational technologies. The most effective communication methods include computer-mediated applications such as email, online discussion boards, and Moodle. In times of war, technology provides students and lecturers with greater control over learning content and the opportunity to collaborate. Digitalisation of education also allows interaction among learners, and between learners and teachers that could otherwise be difficult to achieve in the classroom during the war conflict. On the other hand, the Internet, social media, software applications, etc. allow students to work independently with access to educational platforms, for instance, when they miss class or online meetings due to unsafe conditions in wartime.

Ukrainian students face extreme learning conditions due to the impact of war. The recent studies present the tendency of a learner-centred approach implementation in a learning process where learner autonomy is on broad and major focus. Learner autonomy practices become useful and necessary in wartime and allow learners to 1) identify their strategies; 2) be involved in the learning process by making their own choices; 3) modify and adapt tasks or create their ones in the conditions they live in at present time. Teachers and students find it challenging to maintain ongoing learning without the use of learner autonomy strategies. To summarize, the idea of learner autonomy is evolving as a result of war. War conditions promote the development of students' autonomy, which includes detachment, critical reflection, decision-making, and independent actions.

### ***Research questions***

The current research focuses on the missing issues identified in the literature and addresses the following questions:

1. Have there been any changes in the learning objectives, tools, methods and outcomes for educational participants during wartime in Ukraine?
2. How has the war affected the process of learning English as a second language (ESL) for Ukrainian students, considering their living, social, and psychological conditions?

## **Methodology**

This study has followed a mixed-method approach with quantitative (numerical) as well as qualitative (students' answers) methods to explore Ukrainian students' perspectives of the constraints of ESL learning in wartime while obtaining Bachelor's and Master's degrees at a university in Ukraine. The use of both methods provides a more complete understanding of the research problem and can help to "confirm or cross-validate relationships discovered between variables, as when quantitative and qualitative methods are compared to see if they converge on a single interpretation of a phenomenon" (Fraenkel et al., 2019, p. 558).

### **Participants**

Participants have been students from the Faculty of Foreign Languages, Department of English Philology and Methods of Teaching English at Ternopil Volodymyr Hnatiuk National Pedagogical University, Ukraine, who are obtaining Bachelor's and Master's Degrees in English (total number of students is 75). All participants were aware of the aims and objectives of the study and agreed to participate voluntarily.

## **Procedure**

The research will gather data through a questionnaire. Three Spanish and Ukrainian university lecturers subsequently validated it and anonymously distributed the survey through a Google Form link to participants. The questionnaire was used as an efficient instrument to collect data from a large number of people at the same time. Additionally, responding to the questionnaire eliminates the problem of personal bias. This is because the respondents can fill out the answers on their own time and in any location. This method is more reliable and accurate compared to an interview, resulting in more authentic responses (Fraenkel et al., 2019).

The questionnaire is written in Ukrainian so students to understand it easily and put aside their doubts and uneasiness in taking the survey. Our goal is to ensure that answers are accurate and reliable, so we have designed our premises to facilitate this process. If the questions are not presented in the student's mother tongue, the answers may be distorted. This is because the topic is too sensitive to be answered in a foreign language. Students may have to think too hard about the translation and focus less on the content of the question itself. As a result, they may end up providing inaccurate responses due to their difficulty in performing the necessary interpretation. It took students about 10-12 minutes to complete the questionnaire online.

The questionnaire has twenty-one items organized into three sections. The first section provides general information about participants (gender, age, degree they are obtaining and type of learning they have). The second section is focused on the peculiarities of ESL education in wartime such as the advantages and disadvantages of online/offline studying and educational platforms the students use. The section also pays attention to the structure and organization of teaching and learning processes and how they have been adapted to the war requirements. The third section covers the questions related to the social and psychological conditions of ESL studying in wartime. This section aimed to identify students' main sources of distraction from learning during war conditions. Facilitating the learning process despite the challenges imposed by war requires an understanding of the problems students face. Finally, the last open question is left to allow students to share more comments on the ongoing ESL learning process in wartime to compare the results of qualitative and quantitative collected data that bring reasonable conclusions.

## **Data Analysis**

A quantitative study has been done with numerical data that requires additional information to flesh out the results of the research. This is the purpose behind the explanatory design. In this particular type of design, we first carry out a quantitative method and then use a qualitative method to follow up and refine the quantitative findings. The two types of data are analyzed separately, with the results of the qualitative analysis used to expand upon the results of the quantitative study (Fraenkel et al., 2019).

A SWOT analysis evaluates war online learning settings by outlining the internal (peculiarities of faculty functioning and curriculum) and external conditions (social, war and emotional background) of the current education system. A SWOT analysis is a useful tool for

identifying the strengths, weaknesses, opportunities, and threats in the ESL educational process. It evaluates the negative preconditions of online studying and the advantages of the online mode for further strategic planning, using opportunities and eliminating threats. In the application of this study, strengths and weaknesses are best viewed from the perspective of the students who are active participants, obtaining their degrees in the following war circumstances (Helms & Nixon, 2010; Santos & Zanca, 2018).

For further research on this topic in the future, the results have been examined using a descriptive analysis. This research study is in its initial stage, and a descriptive analysis involves tabulating and reporting the responses in the form of percentages of those who answer in a particular way to each of the questions. Thematic analysis has been conducted to highlight the main topics in the responses to the three suggested blocks of the questionnaire. Students' responses have been used as quotations to include in the descriptive analysis to give more significance to the quantitative findings and reach logical conclusions.

## **Findings**

To assess students' perception of online learning during wartime, we conducted a SWOT analysis. It helped to divide all the external and internal preconditions and circumstances into blocks of strong and weak points of the online educational process, opportunities we can get from learning online and the upcoming threats to prevent them. The result of the SWOT analysis is presented in the form of the table below.

### **Table 1**

*A SWOT matrix of the online educational process during wartime in Ukraine*

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREADS
<ul style="list-style-type: none"> <li>✓ multiple modes of interaction with students and educational materials;</li> <li>✓ various educational platforms available for developing EFL skills for free;</li> <li>✓ learner-centred approach implemented with the raise of 'self-study' part;</li> <li>✓ larger scope of information can be delivered at once;</li> <li>✓ visual instructional materials available any time;</li> <li>✓ having access anywhere, that saves time and energy.</li> </ul>	<ul style="list-style-type: none"> <li>- lack of face to face interpersonal communication;</li> <li>- lack of transparency during examinations online;</li> <li>- lack of self-discipline in terms of deadlines;</li> <li>- technical issues (power cuts and outages, outdated hardware) and unstable internet connection;</li> <li>- lack of feedback;</li> <li>- limited students' assessment tasks.</li> </ul>	<ul style="list-style-type: none"> <li>+ interactive learning using various apps at the same time;</li> <li>+ possibility of frequent meetings;</li> <li>+ learner autonomy developed with rise of motivation;</li> <li>+ retention of educational process;</li> <li>+ becoming resilient and able to recuperate soon;</li> <li>+ eager to get proper education despite hard times.</li> </ul>	<ul style="list-style-type: none"> <li>~ easily distracted because of air raids and social turbulence;</li> <li>~ emotionally vulnerable with PTSD syndrome;</li> <li>~ gaps in learning while fleeing abroad or skipping the classes;</li> <li>~ lack of communicative skills with limited F2F discussions;</li> <li>~ affect private life - constant messaging and beeping;</li> <li>~ harm physical wellbeing in general.</li> </ul>



## Discussion

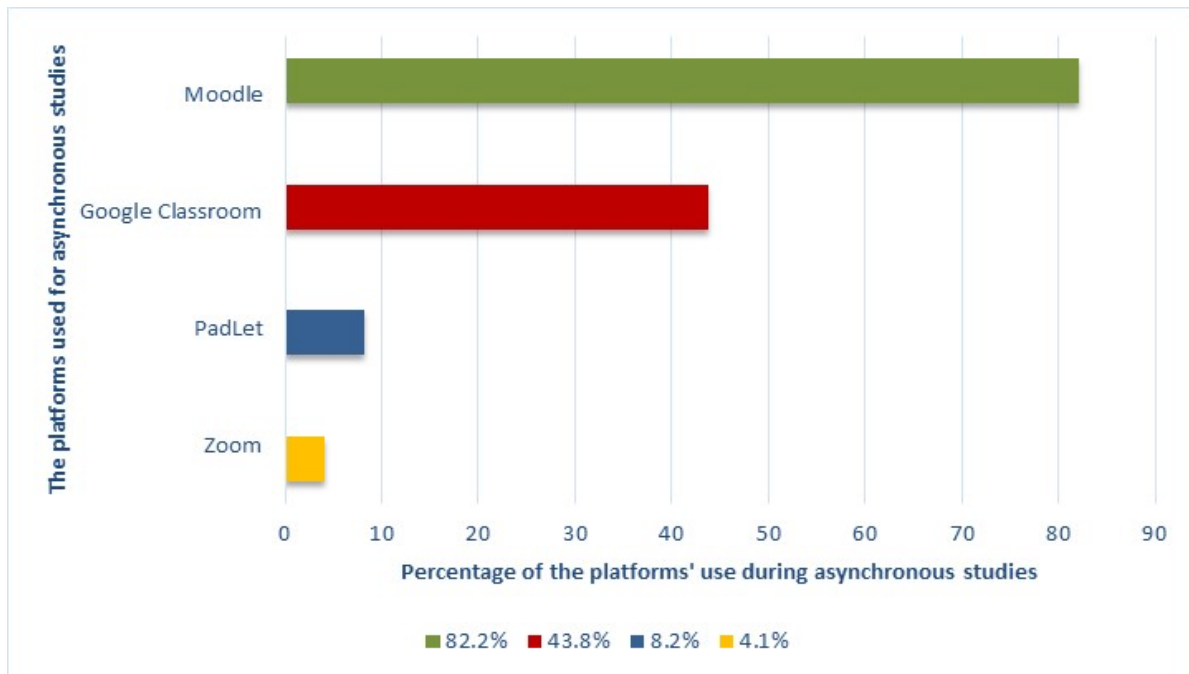
We conducted a SWOT analysis of Ternopil Volodymyr Hnatiuk National Pedagogical University's learning environment and created an online survey that covers the fundamental aspects of the educational process and emotional state. The methodology for the survey is detailed above. The first 3 questions are to figure out the basic information about the group of students that took part in the questionnaire. 93% of the students are female. The field of education tends to have more female teachers than male, as teaching is traditionally seen as a female-dominated profession. 55% of the students are 17-19 years old (first and second-year students), 30% - of 20-22-year-olds (3rd and 4th-year students) and 15% of students are achieving their Master's degree. Blended learning makes it easy to reach first and second-year students. They are more likely to provide advice as they have more years of study ahead. According to our survey results, 97% of participants have had prior experience with online educational platforms. Therefore, we can confidently admit that during the pandemic, individuals were able to overcome any technical issues and acquire the necessary skills to effectively use various educational applications. As a result, online studying has become more convenient and less stressful than before. The second block of questions concerns the educational process. 100% of the students who participated in the investigation agreed that the educational process should continue and that we have no right to halt it until we achieve proper qualifications and knowledge.

As the students of the English language and literature speciality study at least two foreign languages, they feel more comfortable while travelling or relocating in terms of communication with foreigners. So, with the beginning of the war students were forced to flee abroad or be displaced to relatively safer towns because of the constant shelling and air raids. Despite the opportunities, 73.6 % of students stayed in the country and continued their studies from home. Whereas, those who undertook displacement (19 students out of 25) felt uncomfortable and had more pitfalls while continuing their studies abroad.

During wartime, 91% of participants agree that online education is safer than studying at university offline. The main reason is that they feel uncertain and frustrated about hiding in bomb shelters at universities rather than at their own houses or flats. The majority of students (80%) believe that all their specialized subjects should be taught online with the same amount of hours as they were taught offline. It seems that the educational system and teachers have adapted perfectly to the extreme learning and all the syllabi tasks might be fulfilled. The following 20% consider that the amount of classes has been shortened during wartime in comparison to COVID online studying. Due to various factors such as differences in time zones and conflicting schedules, students and teachers are often displaced, making it difficult to hold synchronous morning or late classes. As for the most convenient platforms for synchronous and asynchronous learning processes that teachers and students prefer using, we achieved the following results:

### Figure 1

*Digital platforms used for asynchronous studies (acc. to the questionnaire)*



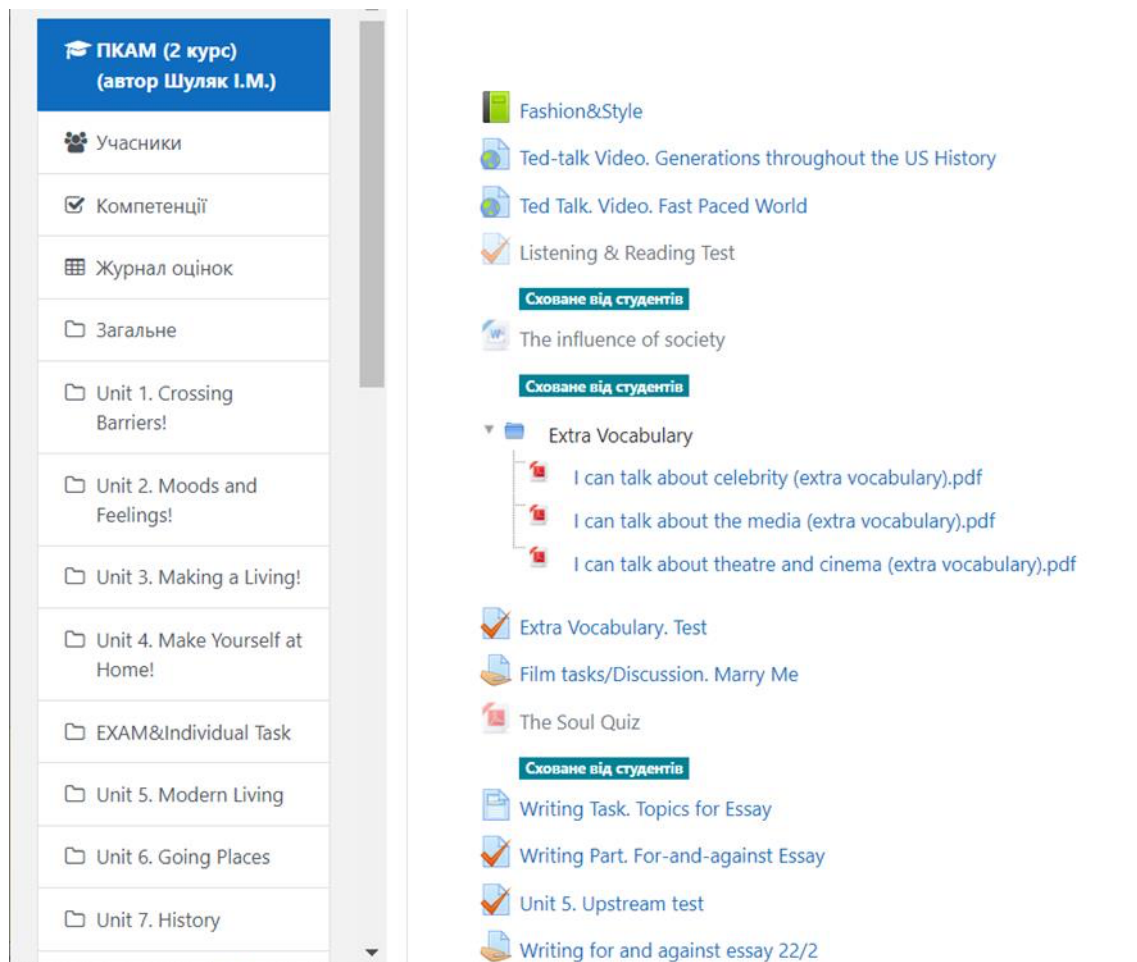
In the event of frequent air raids, seeking for shelling in the region, or scheduled electricity cuts, students switch to asynchronous studies and work independently using the Moodle Platform (82.2%), which is licensed and actively used by the university for a long time before the war. The runner-ups are Google Classroom (43.8%) and PadLet (8.2%). Zoom proved to be inconvenient for asynchronous learning, even with ‘break rooms’ mode (4.1%).

A Center for Distance Learning - Moodle, as it is called at Ternopil University, has all the courses designed that the curriculum comprises. As soon as the participants are enrolled, they get 24-hour access to all the learning materials. Besides the PDF manuals, tables, extra vocabulary for practising, and PPT lecture presentations, Moodle also integrates other apps for having quick access to external links and educational materials (e.g., Tedx, TestEnglish, Youtube, BritishCouncil, etc.). Recent upgrades include a variety of assessment tools such as H5P tools/SCORM set and Unicheck/StrikePlagiarism collaboration.

This is what the common interface of a Moodle page of the English Practice course for 2nd-year students of the English department looks like: (designed and developed by the authors of the article). Its design and a variety of possibilities for practising are proved by 82.2% of students who consider it the most suitable platform for asynchronous studies.

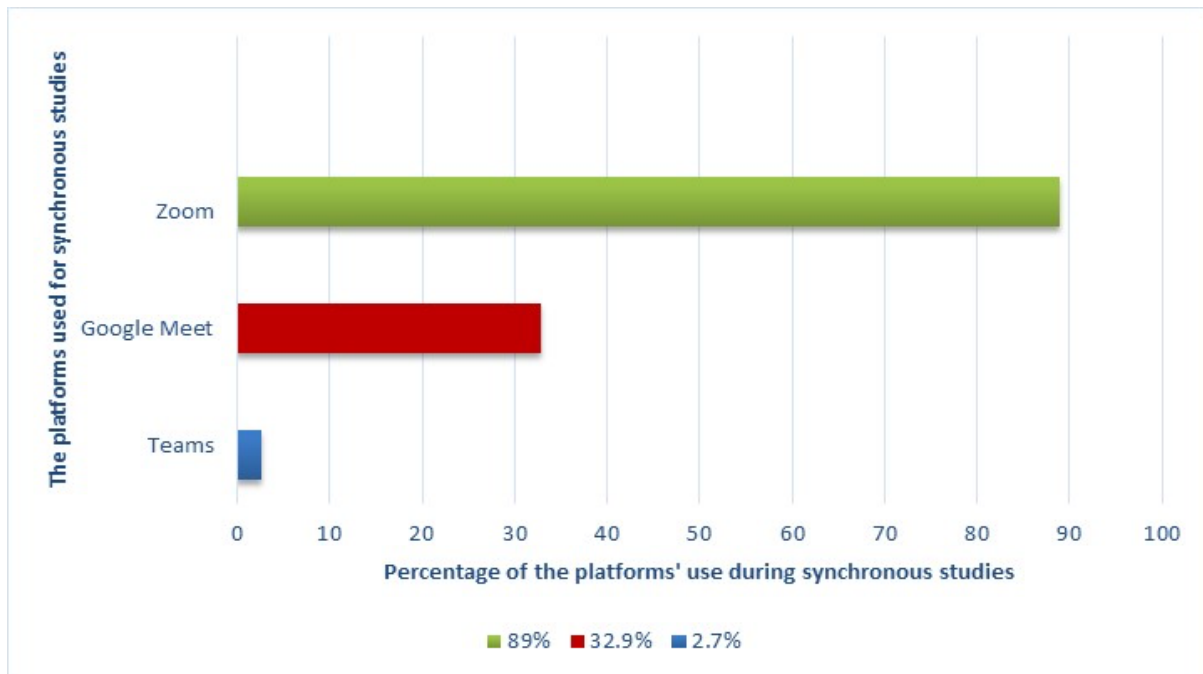
## Figure 2

*Moodle course page layout*



The synchronous mode of teaching and learning is applied to practice oral skills and unprepared speech. Students consider Zoom (almost 90% of the respondents) to be the most relevant and appropriate. It is free and easy to use, breakout rooms possibility and other 'reactions' are available. Besides, it has no 40-minute limit for Ukrainians any more. Also, teachers had some workshops provided by university training staff at the beginning of the lockdown which helped to eliminate all difficulties for Zoom use. The table below demonstrates the results. Google Meet and Teams are the runner-ups for their choice.

**Figure 3**  
*Platforms used for synchronous study*

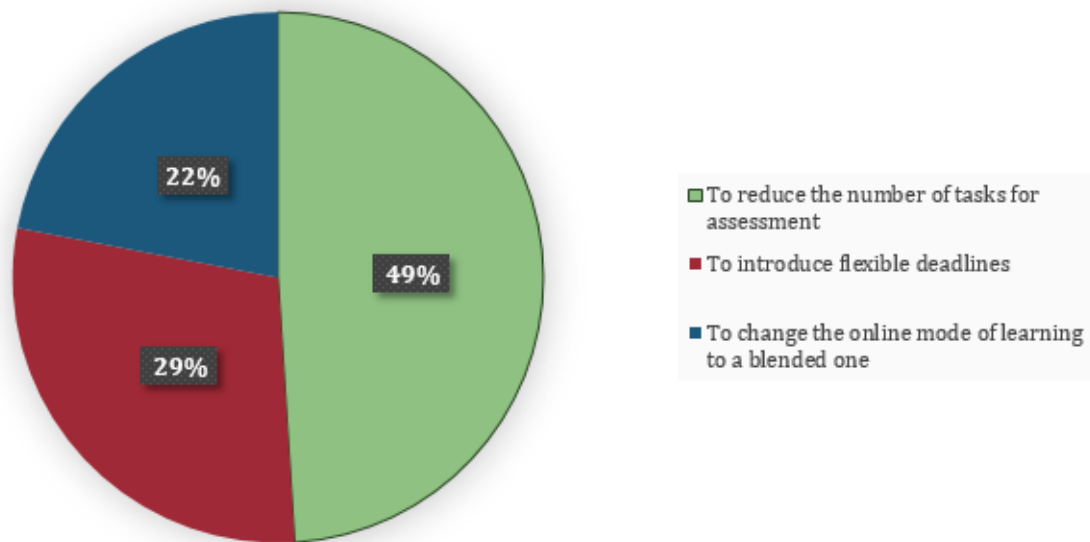


As a result, answering the next question in the survey, almost 73% of students consider that the online process is either perfectly or well organised and the educational platforms cover the basic needs to develop EFL competence. On the other hand, another issue in the questionnaire states that the number of tasks to be fulfilled individually during online classes in wartime is relatively bigger (26%) or much bigger (15%) in comparison to COVID-19 lockdown studying. It raises the urgent need for learner autonomy awareness and its implementation. It is not because the workload is bigger but because the ongoing war distracts immensely.

As a consequence, we asked the participants about changes they would like to bring about to ease the process of studying and the following table depicts them:

**Figure 4**  
*Changes to bring about for the current educational process*

### Changes to bring about for the current educational process



Results of the questionnaire show that 49% of participants indicated that they would like to have an easier workload with fewer tasks to be assessed. Meanwhile, 29% of respondents favoured implementing individual schedules and flexible deadlines. Finally, the remaining 22% of participants prefer a blended mode of learning instead of a full online mode.

An open question finishing up the survey revealed the precise options the students would like to be developed. Among students' feedback about the possible improvements there are the following (grouped by the authors of the article thematically): 1) fully satisfied with online education in such hard times, with no need for any changes, 2) fewer assignments and 'fill in' tasks, more interactive and creative projects to 'escape' from the war, 3) more offline classes when possible, a balance between 'on and off' hours, 4) flexible schedules, more automatization of the educational process (FAQ sections, Canva, QuizLet, Padlet, BB workshops), 5) more compassion and sensitivity from teachers, sharing emotions during classes, 6) enrolling to foreign university courses, more international educational resources and platforms integrated, 7) curriculum revision in terms of the number of courses per year and a balance between compulsory and optional classes.

The third block of the questionnaire in this study was designed to investigate the emotional background of the respondents. Social and technical complexities negatively affect the learning process due to the lack of a proper study environment, hardware and internet, compounded by the ongoing social crisis caused by the war. 97% of participants have admitted that emotional context plays a significant role in learning. Pre-dominance of negative emotions causes memory loss, lack of concentration, anxiety, and distraction. 52% of students consider the ongoing educational process as an additional form of escaping from the horrors of the war. In comparison, almost equal parts of 47.9% consider that online education has its own assignments and workload deadlines and it does not help to forget about the genocide in any way and causes even more constraints. Students feel more anxious (53.4%), more insecure (19.2%), more isolated (23.3%), and more stressed (41.1%). To cope with this situation, students would like to have more communication with teachers (50.7%) and share personal thoughts and emotions (68.5%) about the situation in the region, war crimes, ways to escape, how to overcome anxiety, etc.

To conclude, both teachers and students were unprepared for the challenges of forced online learning during wartime, leading to various issues. Despite martial law that hardens the learning process, teachers can continue to educate students by developing infrastructure for

easy access to information-communication technologies, taking students' feedback and suggestions into account. Findings display that students are eager to be fully engaged in their studies, achieve a better balance between online and offline activities, develop more empathy, consideration, and tolerance, and have more personal communication with their teachers. Supplementing students with more creative and interactive projects and tasks will facilitate wartime education.

## **Conclusions**

Ukrainian educational institutions and their participants have been directly and indirectly negatively affected by the military invasion, both in the long and short terms. The war has a profound impact on students' lives, resulting in changes to class arrangements, duration, and priorities for assessment and class activities. However, the survey reveals that 100 % of students believe that the educational process should continue even in wartime. At the same time, the war crisis has affected student training and resulted in student demotivation and extreme learning conditions.

The SWOT matrix has been designed to outline the constraints and challenges of online education in wartime. The matrix represents the strengths and weaknesses of one's educational background and the opportunities and threats to be mindful of. It is necessary to strategize ways to facilitate online education during extreme learning conditions. The findings display that there are strong pillars of online education. Multiple modes of interaction with students and overall access to educational materials using various educational platforms allow a larger scope of information to be delivered at once with the help of visual instructional materials. Accessing the learning materials from anywhere saves time and energy. Educational platforms and apps provide opportunities for interactive learning, learner autonomy, full involvement in the educational process, and resilience in seeking education despite challenging times. The identified weakest points (safety concerns, lack of face-to-face communication, self-discipline, feedback and transparency during examinations; technical issues (power outage and outdated hardware); unstable internet connection; limited assessment tasks) pose threats, potentially affecting health, emotional well-being, and learning outcomes.

The outlined constraints and challenges introduce the concept of extreme learning, defined as the use of technology for learning purposes in novel, unusual ways, involving interactive learning activities, free and open educational resources, or an online learning portal. Extreme learning might include online communities, participating in social media, and engaging in video conferences with people in different locations. Thus, Ukrainian students are compelled to study using different applications and educational platforms synchronously and asynchronously in extreme conditions due to the war. The survey has revealed students' preferences for educational apps, with Zoom (89%) being the preferred choice for synchronous learning and the Moodle platform (82.2%) for asynchronous learning. However, adjustments are needed to ease the educational process, such as reducing the number of assessed tasks, implementing individual schedules or flexible deadlines, and adopting a blended mode instead of a fully online mode. The pitfalls in the learning process are categorised into technical, social, and emotional ones. These extreme conditions, where the learning process is preserved, lead to the development of students' learner autonomy.

Learner autonomy is inherently essential in developing a learner-centred approach by teachers during wartime, involving the implementation of personalized differentiated learning type. These key teaching aspects provide students with explicit skill-based instructions for assignments, empower them by giving control over learning, encourage collaboration, introduce flexible class arrangements and engage students in the learning process even under considerable pressure of wartime conditions.

This study represents the initial stage for further research on the short-term and long-term impact of war on students receiving education in Ukraine. Future surveys are encouraged to replicate the current study with a large population sample to determine the overall perceptions of constraints the Ukrainian students face in extreme learning environments. We believe that this study is particularly relevant to all members of the educational process. It provides a preliminary understanding of the current challenges and aspects of the learning process that require urgent attention during wartime. This awareness can enhance students' efficacy and guide teachers in adjusting their teaching styles to improve students' knowledge, motivation, and productivity at the university during wartime.

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## Appendix 1

## Questionnaire

Questions	Options to answer
<b>General Information</b>	
1. Стать/Sex	-Жіноча/Female -Чоловіча/Male
2. Вік/Age	-17-19 -20-22 -23+
3. Чи працювали Ви з освітніми онлайн платформами до війни?/Have you worked with online platforms before the war?	-так/yes -ні/no
<b>Peculiarities of the educational process</b>	
4. Чи потрібно здійснювати освітній процес під час війни?/Should ESL studying be held in wartime?	-так/yes -ні/no
5. Чи покидали/покинули Ви межі України під час навчання у воєнний стан?/ Have you left the country during your studies after the war started?	-так/yes -ні/no
6. Чи виникали додаткові труднощі у навчанні під час перебування не за місцем проживання під час війни?/ Did you have additional obstacles in studying while being displaced?	-так/yes -ні/no -не змінював місце проживання/ wasn't displaced
7. Чи бачите Ви переваги онлайн навчання під час війни?/Do you see any advantages of ESL online learning in wartime?	-так/yes - ні/no
8. Чи змінилася кількість профільних предметів, які продовжують проводитись онлайн під час війни? / Has the amount of specialty's classes which were carried out online in wartime changed?	-так/yes -ні/no
9. Яка освітня платформа є найзручнішою для асинхронного дистанційного навчання під час війни? / What platform is the most suitable for asynchronous mode for distance ESL classes in war time?	-Moodle -Google Classroom -PadLet -Other
10. Яка освітня платформа є найзручнішою для синхронного режиму навчання під час війни? What platform is the most suitable for a synchronous mode for distance ESL classes in wartime?	-Zoom -Google Meet -Teams -Other
11. Я вважаю, що онлайн-платформи забезпечують формування англомовної комунікативної компетентності під час війни./ I consider that online platforms satisfy the development of oral	1 - дуже погано/ poorly 2 - погано/ bad 3 - задовільно/ satisfactory 4 - добре/ good 5 - відмінно/ perfect

communication skills in the English language in war time.	
12. Я вважаю, що кількість завдань, які потрібно виконувати індивідуально, була збільшена для студентів у час війни порівняно з Covid-карантином. / I consider the quantity of tasks to be carried out individually has been increased for us during the Wartime in comparison to Covid lockdown?	1 - не збільшена/ wasn't increased 2 - збільшена несуттєво/ increased a little 3 - збільшена/ increased 4 -суттєво збільшена/ increased immensely
13. Які зміни слід увести у навчальний процес під час війни?/What changes should be introduced in ESL learning during wartime?	a) запровадити індивідуальні графіки навчання /to launch individual schedule b)зменшити кількість домашніх завдань / to reduce amount of tasks c)змінити формат навчання/ to change the mode of learning (mix online classes with offline ones)
<b>Social and Psychological Aspects of Learning</b>	
14. Я вважаю, що соціальні умови життя впливають на процес навчання у час війни./ I consider that the social aspect of living conditions influences the learning process in wartime.	1-не впливають / don't influence 2-впливають несуттєво / influence a little 3-впливають / influence 4-суттєво впливають / influence immensely
15. Я вважаю, що технічні умови життя впливають на процес навчання у час війни. / I consider that the technical aspect of living conditions influences the learning process in wartime.	1-не впливають / don't influence 2-впливають несуттєво / influence a little 3-впливають / influence 4-суттєво впливають / influence immensely
16. Я вважаю, що психологічний стан впливає на процес навчання у час війни. I consider that the psychological state influences the learning process in wartime.	-так -ні -не значно впливає -не повинен впливати
17. Я вважаю, що онлайн-навчання допомагає мені «втекти» від жахів війни? I consider that the learning process helps me to "escape" from war atrocities.	-так/yes -ні/no

<p>18. Я відчуваю, що коли я беру участь у навчальному процесі під час війни порівняно з ковід локдауном, я почуваюсь..../I feel more... while still being engaged in the educational process during wartime in comparison to covid lockdown?</p>	<p>- більш стурбовано/ more anxious          - більш ізольовано/ more isolated          - більш стресово / more stressful          - більш не захищено / more insecure</p>
<p>19. Я вважаю, що кількість спілкування (студент-викладач) змінилося під час війни порівняно з карантинном через Covid? I consider the amount of communication (we have with teachers) changed during the Wartime in comparison to Covid lockdown?</p>	<p>-так /yes          - ні / no</p>
<p>20. Я вважаю за потрібне висловлювати свої емоції, ділитись ними з одногрупниками на онлайн-заняттях з практики англійської мови під час війни? I would like to share my emotions with the groupmates at ESL online classes during wartime?</p>	<p>-так/ yes          -ні/ no</p>
<p>21. Запропонуйте варіанти змін до навчального процесу щодо здобуття фахової дисципліни у час війни/ Share your ideas about improving ESL learning process in wartime.</p>	<p>own answer</p>