

The State of Education in Ukraine under Military Aggression

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Resumé

Ryska federationens fullskaliga invasion av Ukraina har orsakat omfattande förödelse och förstörelse av utbildningsinstitutioner över hela landet, vilket har fått Ukrainas utbildningsministerium och lärare att vidta omedelbara åtgärder för att organisera utbildningsprocessen. I städer och samhällen med förhöjd risk bedrivs undervisningen huvudsakligen på distans (online) eller i hybridform. I andra regioner i Ukraina bedrivs undervisningen i enlighet med den rådande säkerhetssituationen, vilket kan innebära antingen personlig undervisning eller undervisning online. Den viktigaste förutsättningen för att bedriva undervisning är dock säkerheten för alla som deltar i utbildningsprocessen, inklusive elever, lärare och annan personal. Statligt stöd ges i form av finansiering för byggande och utrustning av skyddsrum, underjordiska skolor och liknande skyddsinfrastruktur. Det finns också fastställda rekommendationer för åtgärder som lärare och elever ska vidta vid lufträdslarm och fiendens beskjutning. En särskilt viktig fråga är att ge psykologiskt stöd till alla deltagare i utbildningsprocessen, eftersom långvarig stress har en negativ inverkan på både den fysiska och den psykiska hälsan. Ukrainska utbildningsinstitutioner implementerar olika metoder och tekniker för att ge psykologisk hjälp till barn och lärare. Noterbart är att det nationella programmet för psykisk hälsa "Hur mår du?" ("Ty Yak?") lanserades 2025. Målet med detta program är att främja en samhällskultur som värnar om psykisk hälsa. Fokus ligger på att hantera stress och negativa känslor under krigstid och att främja den resiliens som krävs för psykologisk återhämtning.

THE EDUCATION SYSTEM in Ukraine has faced profound challenges over the past decade due to ongoing military conflicts, with the situation escalating dramatically following the full-scale invasion in February 2022. While the initial conflict in 2014 marked the beginning of a protracted struggle in the eastern regions of Ukraine, the 2022 invasion disrupted the educational landscape nationwide, affecting millions of students, teachers, and educational institutions. Education, as both a social and strategic resource, plays a pivotal role in maintaining societal cohesion, fostering resilience, and preparing

future generations for national reconstruction and development.¹

Prior to 2022, Ukraine had already begun reforms aimed at modernizing education and aligning curricula with European standards, yet the conflict had introduced structural and operational vulnerabilities. Educational institutions across all levels faced intermittent closures, infrastructural damage, and interruptions in the teaching process.² Despite these challenges, Ukrainian institutions demonstrated remarkable adaptability, implementing distance learning solutions and alternative education strategies. Nevertheless,

these measures could not fully mitigate the disruption caused by sudden escalations in hostilities, displacement of populations, and the constant threat of attacks.

Over seven million Ukrainians have sought refuge in European countries.

The human dimension of the crisis is particularly striking. Teachers and academic staff are often required to operate under life-threatening conditions, adapting lesson plans to changing circumstances while ensuring the safety and well-being of students. Learners face interruptions to education, psychological stress, and, in many cases, displacement that forces them to continue studies in unfamiliar communities or online. Parents also experience heightened stress, balancing child safety with educational continuity.

Since the onset of the full-scale Russian invasion of Ukraine, over seven million Ukrainians have sought refuge in European countries, a substantial proportion of whom are school-aged children. According to UNESCO (2025), as of 2024, more than 664,000 Ukrainian students have been enrolled in educational institutions across Europe, representing approximately 78% of all school-aged refugee children in host countries. Despite these efforts, a significant number of children continue to rely solely on Ukrainian online programs, while some remain completely out of formal education. Specifically, 16% of displaced students participate exclusively in Ukrainian online schooling.³

From a policy perspective, the Ukrainian government, in coordination with international partners, responded rapidly to the crisis. Emergency measures included the expansion of digital learning platforms, temporary relocation of educational facil-

ities, psychological support programs, and targeted financial assistance.⁴ International organizations, including UNESCO, UNICEF, and the World Bank,⁵ provided critical guidance, funding, and logistical support to ensure continuity of learning. These interventions underscore the strategic importance of education in national resilience and crisis management, highlighting the intersection between educational policy, social stability, and national security.

Despite these efforts, significant gaps remain. Comprehensive studies analyzing the cumulative impact of war on Ukraine's educational system, including both infrastructural and human dimensions, are limited. Existing literature often addresses isolated aspects such as online learning, psychosocial support, or infrastructure damage, without integrating these factors into a holistic understanding of the educational crisis. This paper aims to fill that gap by examining the state of education in Ukraine under full-scale military aggression, emphasizing the interplay between human experiences, institutional adaptation, and policy responses.

By exploring the challenges faced by learners, educators, and educational institutions from 2014 to the present, with a particular focus on the 2022 escalation, this study provides insights into both immediate and long-term implications for educational policy, national resilience, and societal cohesion. Understanding these dynamics is crucial not only for mitigating current disruptions but also for informing strategies that enhance the robustness and adaptability of educational systems in conflict-affected regions.⁶

Impact of Military Aggression on Educational Infrastructure

Since the onset of the full-scale invasion, the Ukrainian education system has been

undergoing one of the most severe challenges in its modern history: every seventh educational institution has been damaged or destroyed. The war has inflicted substantial harm on the educational infrastructure. According to World Bank (RDNA4) estimates,⁷ 3,373 educational institutions have been damaged or demolished since the beginning of the full-scale invasion, 385 of which have been completely destroyed.

National statistical sources likewise indicate that,⁸ 4,139 educational facilities have been affected by bombardments and shelling, with 394 fully ruined (*Figures 1 and 2*). These figures represent far more than numerical data – they reflect the reality of thousands of children deprived of regular and safe learning environments.

The Ministry of Education and Science of Ukraine has even launched a dedicated platform featuring an interactive map of destruction, yet the scale of the inflicted damage is expanding faster than the moderators are able to update the data. The Kharkiv region – which before the war held the reputation of Ukraine’s “student capital” – has suffered the most severe losses in its educational infrastructure. The destruction of universities in this region, which had been

home to more than 160,000 students, constitutes a double blow to both the national education system and the country’s scientific and intellectual potential.⁹

The deliberate destruction of educational institutions is not merely a collateral consequence of military operations, but rather a deeply strategic assault on Ukraine’s human capital. By targeting schools and universities, the aggressor strikes at the future economic and scientific capacity of the country, seeking to deprive the state of its most valuable resource – an educated youth. In this context, the preservation of educational and research potential amid wartime conditions becomes a matter of national security and identity.

As of December 2024, approximately 741,000 children were enrolled in hybrid learning formats, combining in-person and remote instruction due to the absence of bomb shelters in their schools, while a further 443,000 students were studying entirely online in areas affected by active hostilities.¹⁰

In response to these challenges, the state has launched a large-scale program for the transformation of the education system, which includes, among other priorities, the renewal of educational infrastructure. One of its key objectives is the return of children

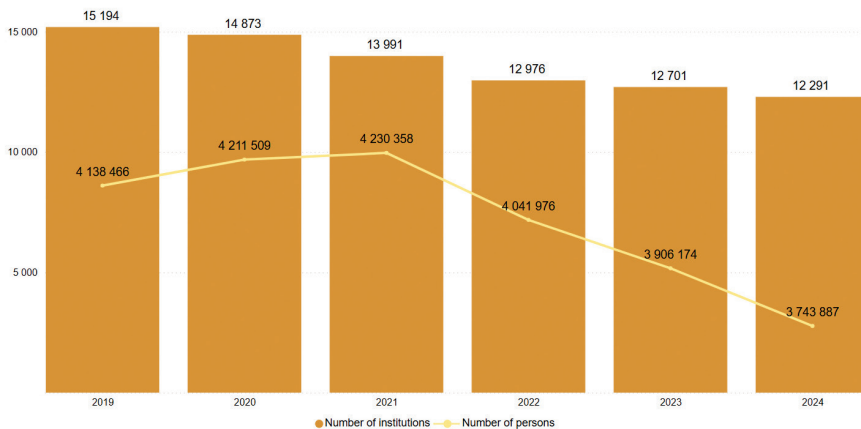


Fig 1 Number of Schools for 2019–2024.¹¹

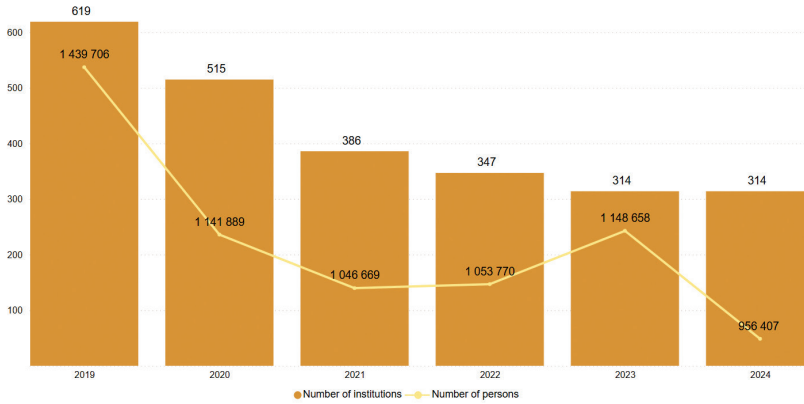


Fig 2 Number of universities for 2019–2024.¹²

to in-person learning, as this format ensures the highest quality of skill acquisition. Above all, however, it is essential to guarantee the absolute safety of the educational process.

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Accordingly, the current transformation of education in Ukraine is aimed at ensuring high-quality instruction, modernizing the governance of educational institutions, and adapting curricula to the actual demands of the labor market. These reforms extend across all levels of education: preschool, general secondary, vocational and technical, and higher education.

Nonetheless, the greatest present challenge to the full functioning of the sector is the vulnerability of educational infrastructure to enemy shelling and the urgent need to make the learning environment completely safe for children and youth. A secure environment is a strategic prerequisite for encouraging families and children to return to Ukraine. For this reason, the state is in-

vesting in the construction of shelters, underground schools, and energy-independent, barrier-free educational spaces.

Under conditions of constant danger, particularly in frontline cities such as Kharkiv, Sumy, Zaporizhzhia, Kherson, and others, a unique and critically important innovation has emerged – underground schools. These are not merely shelters, but fully functioning educational institutions that enable the resumption of in-person learning while ensuring the physical safety of students. As of September 2025, seven underground schools had been opened in Kharkiv, supplementing the instructional spaces that had previously been arranged in the city’s metro stations.

The construction of such facilities is ongoing throughout Ukraine. By the end of 2025, more than 180 underground educational sites are expected to be opened. In particular, the Zaporizhzhia region has already launched its eighth underground school, built in less than six months, designed to accommodate 1,000 children studying in two shifts.¹³

Unfortunately, it is not possible to provide all regions of Ukraine with underground schools within a short timeframe. Therefore, in order to return as many children as possi-

ble to effective learning, a variety of educational formats have been introduced.

One of the most profound consequences of the war for the Ukrainian education system is the depletion of its human capital. Since the beginning of the full-scale invasion, a considerable number of teachers and university staff have either been displaced internally or have emigrated abroad. According to UNESCO's Global Education Monitoring Report, more than 25,000 Ukrainian educators were forced to leave their places of work due to security threats and displacement.¹⁴ In many frontline and high-risk regions, such as Kharkiv and Mykolaiv, the shortage of qualified staff has become structurally entrenched, as a large share of young specialists have chosen not to return, even temporarily, due to continued shelling and infrastructural instability.

Online learning has become a vital lifeline.

Another trend is the professional reorientation of academic staff who, having lost the possibility of stable employment in their institutions, have transitioned to other sectors or to the private IT and NGO sectors, where remote and safer working arrangements are available. This internal “brain drain” is compounded by the partial dismantling of long-standing research communities. The World Bank's Rapid Damage and Needs Assessment (RDNA4) notes that research teams and academic schools in Ukrainian universities have been fragmented or disbanded as a result of evacuation, campus closures, and the destruction of laboratories and research facilities.¹⁵ The loss is therefore not solely numerical, but institutional and intellectual: the erosion of collective expertise jeopardizes the reproduction of

scientific traditions and the continuity of higher education quality.

The full-scale military aggression has inflicted profound and multidimensional damage on Ukraine's educational infrastructure. Physical destruction of school and university buildings, the loss of laboratories, libraries, and other educational resources, combined with the displacement and emigration of teachers and academic staff, has created a severe disruption in both the delivery and quality of education. The erosion of human capital, including the departure of young professionals and the fragmentation of research teams, further undermines the long-term scientific and educational potential of the country. Moreover, the ongoing vulnerability of educational facilities in frontline regions has necessitated innovative solutions such as underground schools and reinforced shelters, highlighting the central role of safety in sustaining learning continuity.

These cumulative challenges have compelled the education system to adapt rapidly, shifting away from traditional classroom-based instruction. As a result, there has been a significant transition toward remote and emergency online learning, designed to ensure that children and students can continue their education despite ongoing hostilities and infrastructural vulnerabilities. This shift not only addresses immediate safety concerns but also introduces new pedagogical and technological challenges.

Transition to Distance and Online Learning

In response to the challenges of war, the Ukrainian educational system has demonstrated remarkable flexibility, rapid adaptation, and the implementation of innovative solutions. One of its most significant and large-scale achievements has been the swift

transition to distance learning. This shift was facilitated through the extensive use of online platforms such as Google Classroom, Moodle, Zoom, and Microsoft Teams, as well as the launch of the “All-Ukrainian Online School”, which provided nationwide access to high-quality video lessons for school students.

Online learning has become a vital lifeline, ensuring the continuity of the educational process when in-person instruction was impossible due to active hostilities or evacuation. Furthermore, distance education contributes to psychological stability by allowing learners to study from home, in a safer and more secure environment, without constant exposure to the threat of physical danger. This considerably reduces stress levels and enables students to maintain focus on their studies despite the challenging circumstances.

In the current circumstances, distance education has become increasingly significant. In contemporary Ukraine, distance education has transformed from a merely alternative form of instruction into the principal and prioritized model of organizing the educational process. This mode of learning offers several essential advantages, including:

1. equitable access for all social groups;
2. the possibility to avoid face-to-face attendance during periods of heightened risk;
3. continuous communication between instructors and learners;
4. the integration of comprehensive digital learning platforms;
5. the implementation of advanced educational technologies;
6. personalized learning trajectories;
7. opportunities for receiving individual academic support.

During wartime conditions and frequent air-raid alerts, it is often challenging to adhere to a standard timetable or plan lessons according to predetermined topics. Educational institutions are therefore required to rapidly adjust their instructional practices and maintain flexibility in curriculum delivery. This involves prioritizing course topics, differentiating between those that are easier to assimilate and those requiring more in-depth study, as well as identifying materials suitable for autonomous learning supported by high-quality instructional resources. Under such circumstances, distance education must include clear guidance on how each learning activity should be completed, along with transparent criteria that enable learners to evaluate their own progress.

Distance learning may be implemented by the teacher in both synchronous and asynchronous modes through the use of electronic educational platforms (such as Google Workspace, Google Classroom, Moodle, Novi Znannya, HUMAN.UA) as well as online communication services and tools (including Zoom, Skype, Microsoft Teams, and core Google services such as Gmail, Calendar, Meet, Jamboard, Chat, Hangouts, YouTube, etc.).

The National University “Yuriy Kondratyuk Poltava Polytechnic” has integrated the Moodle platform into its educational process to support distance learning. Within this platform, instructors comprehensively manage all aspects of their courses, including the course syllabus, curriculum, lecture materials, practical assignments, and tasks for independent study. Moodle also serves as a centralized environment for student assessment, enabling both formative evaluation, conducted throughout the course by topics, and summative evaluation, including differentiated credits or final examinations. The use of Moodle ensures structured or-

The screenshot shows a Moodle course page. At the top, there are navigation links: 'На головну', 'Особистий кабінет', and 'Мої курси'. The course title is 'Формування soft skills у суб'єктів освітнього процесу_ д.ф. (015)'. Below the title are links for 'Курс', 'Налаштування', 'Учасники', 'Журнал оцінок', 'Звіти', and 'Більше'. The main content area features a dropdown menu with 'Згорнути все' and a section titled 'Дистанційний курс навчальної дисципліни' with the course title. Below this, it states 'підготовки здобувачів вищої освіти за третім (освітньо-науковим) рівнем доктор філософії зі спеціальності 015 "Професійна освіта (за спеціалізаціями)" за освітньо-науковою програмою "Професійна освіта"'. There is a section for the author, 'Автор курсу', with a photo of Tetiana Stepanivna Plachinda and her title: 'Плачинда Тетяна Степанівна - професор кафедри фізичної культури та спорту факультету фізичної культури та спорту Національного університету «Полтавська політехніка імені Юрія Кондратюка», доктор педагогічних наук, професор'. A left sidebar contains a menu with various course-related items like 'Новини та оголошення', 'Інформація про дистанцій...', 'Робоча програма навчаль...', 'Силабус навчальної дисци...', 'Потіжневий графік вивче...', 'Система оцінювання', 'Глосарій з дисципліни "фо...', 'Методичні матеріали', 'Методичні рекомендації...', 'Методичні рекомендації д...', 'Методичні рекомендації с...', 'методичне забезпечення ...', 'Науково-технічна бібліоте...', and 'Рекомендовані джерела іф...'.

Fig. 3 Sample course page on the Moodle platform of the National University “Yuriy Kondratyuk Poltava Polytechnic”.

ganization of learning materials, facilitates continuous interaction between students and instructors, and provides a flexible framework that supports personalized learning paths and efficient monitoring of academic progress (Fig. 3).

However, the problem is that distance learning requires a stable Internet connection and access to appropriate technical devices (such as a computer, laptop, tablet, or smartphone) for all participants in the educational process. In the current war environment, frequent power outages and disruptions to telecommunications infrastructure caused by large-scale attacks on Ukraine’s energy system significantly hinder access to online learning environments. As a result of Russian attacks on Ukraine’s energy infrastructure, particularly in 2022–2023, the country experienced widespread power outages. On November 23, 2022, all four operational nuclear power plants in Ukraine were simulta-

neously shut down, causing partial electricity losses across all regions of the country.¹⁶

In 2024, due to continued Russian attacks, Ukraine lost nine gigawatts of generation capacity, which led to the implementation of scheduled power outages, particularly in frontline regions such as Sumy, Kherson, Zaporizhzhia, Mykolaiv, Dnipropetrovsk, Chernihiv, Kharkiv, Odesa, and Kyiv regions.¹⁷ The situation remains challenging to this day, with scheduled power outages still affecting households across the entire country. Consequently, many learners experience limited or unstable connectivity, which is further exacerbated by disruptions in mobile Internet services, as mobile base stations often lack power during these outages. These infrastructural limitations create substantial disparities in access to online education and intensify existing digital inequalities. Ensuring equitable participation in distance learning therefore remains a sig-

nificant challenge, necessitating additional institutional support, adaptive teaching strategies, and the development of resilient technological solutions to maintain educational continuity.

One potential solution to mitigate the adverse effects of ongoing power outages is the use of backup generators, both in industrial facilities and for private consumption. Generators can provide temporary energy supply, ensuring the operation of essential infrastructure, including educational and communication technologies. However, the acquisition and operation of generators represent a substantial financial burden, making them inaccessible for many households and smaller institutions. This economic limitation underscores the need for targeted governmental and institutional support, such as subsidies, shared community resources, or centralized power solutions, in order to maintain continuity of education and minimize inequalities in access to essential services during periods of energy disruption.

Despite the profound negative consequences of the Russian Federation's military aggression and the persistent security threats, the adoption of online learning has engendered several positive transformations within the educational process. Beyond ensuring the continuity of instruction, the distance learning modality has actively promoted the development of advanced digital competencies among both students and educators. Teachers have been compelled to rapidly acquire proficiency in a diverse array of digital communication tools, educational management platforms, and interactive content creation technologies. This accelerated engagement with digital resources has not only facilitated the modernization of pedagogical practice but has also fostered greater adaptability and resilience within the teaching workforce. Furthermore, the inte-

gration of technology-mediated instruction has catalyzed structural and methodological innovations, contributing to a broader digital transformation of the education system and laying the groundwork for sustained improvements in instructional quality, learner engagement, and educational accessibility under conditions of crisis.

An important aspect of distance learning during wartime has been the enhanced role of socio-emotional support. Online interactions and communication with teachers and peers can partially mitigate the sense of isolation caused by staying at home or in other safe locations. In this context, the learning environment fulfills not only educational functions but also stabilizing and motivational roles, supporting the psychological resilience of learners.

Furthermore, distance learning has ensured continued access to education for children who were forced to temporarily leave their homes and relocate to other regions of Ukraine or abroad. The ability to participate in educational activities regardless of geographic location has helped maintain connection with the Ukrainian school system and the national curriculum, which is especially important for preserving educational continuity and national identity.

As of 2024, approximately 665,000 Ukrainian pupils are studying abroad, with about 392,776 of them remaining enrolled in Ukrainian secondary schools. Of these, 62% participate in the education process through distance learning.¹⁸ The enrollment of Ukrainian students in formal education in European host countries has increased, reaching an average of 78% across 10 countries in 2024. Among those enrolled, 29% follow both host country schooling and Ukrainian online education, while 16% rely solely on Ukrainian online education.¹⁹

This widespread participation in online education underscores the critical role of digital learning platforms in maintaining educational access for displaced Ukrainian children. Continuing to support and expand these online educational opportunities is essential not only for preserving academic progress but also for fostering a sense of community and cultural identity among students separated from their homeland. Moreover, online education offers flexibility and resilience, allowing students to continue their studies amid ongoing conflict and displacement.

Organisational and Psychological Problems Related to Constant Air-raid Alerts

Today, Ukraine's educational system is experiencing perhaps the most challenging period in its modern history. It has suffered

significant infrastructural losses and faced acute psychological challenges. However, rather than succumbing to the crisis, it demonstrates remarkable resilience and adaptability. The large-scale transition to online learning, along with the unique experience of constructing underground schools in Kharkiv, Zaporizhzhia, and other cities, are vivid examples of how innovations born out of adversity can become catalysts for progress.

Since the onset of the full-scale Russian-Ukrainian war, the European Union has established a distinctive coalition to support Ukraine, engaging international organizations in educational projects, including UNDP, UNICEF, UNOPS, as well as charitable and humanitarian foundations. Through this collaborative effort, safe educational environments are being created simultaneously across different regions of Ukraine, schools and kindergartens are being restored, shelters are being constructed, and the regular



Fig. 4 Metro schools in Kharkiv.

educational process is being reinstated. The EU firmly believes that, despite the war, no time should be lost in providing education and facilitating the psychological recovery of children and youth.²⁰

The establishment of educational spaces in the metro enabled the continuation of classes even under conditions of active hostilities. Finn Church Aid (FCA) is the largest international non-governmental organization in Finland engaged in humanitarian assistance. Within the framework of the project, Finn Church Aid supports the Metro Schools in Kharkiv. To ensure the safety and functionality of the classrooms, the organization provided the necessary equipment, including refrigerators, disinfection systems, fire safety equipment, and other essential resources.²¹

A priority task for Ukraine under martial law is the preservation of the lives and health of its citizens, particularly children, and the provision of their access to education. The Ministry of Education and Science of Ukraine emphasizes that the educational process during martial law must be primarily focused on creating safe learning conditions.²² When organizing the educational process, regardless of the chosen format (in-person, remote, or blended), it is imperative that classes be immediately suspended upon the activation of an “Air Raid Alarm” or any other alert signals. Participants in the educational process must proceed in an organized manner to civil protection shelters and remain there until the alarm is lifted, continuing educational activities within the shelter whenever feasible.

An important aspect of organizing the educational process during wartime is the continuous reinforcement to students of the necessity to adhere to safety measures. The threat of enemy air attacks persists even during online classes. Therefore, both school teachers and university lecturers must ad-

here to clear protocols in the event that an air-raid alert is announced during an online session:

- clarify that once the “All-clear” signal is issued, the class will resume according to the timetable and students will be required to reconnect to the session;
- emphasize the need for immediate relocation to a predetermined safe place (shelter) designated by their families;
- advise students to leave the online meeting by clicking “leave conference” and to switch off their computers;
- ensure that all participants have exited the online session.

Furthermore, it is essential to conduct periodic drills and provide guidance on digital safety measures, ensuring that both educators and students are well-prepared to act quickly and calmly. By establishing and reinforcing these procedures, educational institutions can minimize risk, maintain continuity of learning, and support the well-being of all participants even under conditions of ongoing threat.

While a damaged building can be restored given the necessary resources, dealing with the traumatized psyche of students and adults is far more complex. The long-term consequences of living under constant stress are already evident, and it is unrealistic to expect that they can be addressed within a short period. During prolonged stress, such as repeated air raid alarms, a dangerous reaction can occur in the human body, manifesting as habituation to these alarms. This is a form of psychological adaptation, in which continuous stress becomes part of our everyday life. This process helps reduce the immediate emotional response to threats, allowing us to continue functioning despite the surrounding danger. Although this may seem like a useful coping mechanism, there

is a risk that such adaptation can lead to the ignoring of real threats or underestimating the necessity of taking safety measures. In other words, a person may lose the ability to distinguish between safety and danger.

When an air raid alarm sounds, the human body responds with a surge of stress hormones, such as adrenaline, which prepare us for a rapid reaction to danger by accelerating the heartbeat and heightening alertness. This constant state of “fight or flight” readiness can be exhausting, leading to anxiety, sleep disturbances, and a decline in emotional well-being, necessitating strategies for adaptation and support to safeguard mental health.

Prolonged stress also depletes physical energy, weakens the immune system, and increases the risk of various health problems.

We do not know when the next air raid alarm will occur, and our nervous system, under chronic stress, remains in a continuous state of anticipation. Prolonged stress also depletes physical energy, weakens the immune system, and increases the risk of various health problems. Therefore, it is essential to find effective methods for managing stress, ensuring adequate rest, and seeking support. Identifying personal strategies for stabilization and recovery is crucial for maintaining mental health to the greatest extent possible under wartime conditions.

Within the framework of the Finn Church Aid project,²³ the psychological support program “Safe Space” is being implemented. Its aim is to help students cope with stress, return to normal life, feel safer, and also to:

- strengthen resilience to stress;

- learn to independently restore their emotional state;
- more easily adapt to life changes following traumatic events;
- improve communication skills;
- learn to regulate emotions;
- foster an atmosphere of support, trust, and goodwill within the group.

Through such sessions, children learn to express their feelings, reduce anxiety levels, and build friendly relationships with others.

An integral part of the educational process during times of constant danger is the provision of psychological support to all participants. Following intensive shelling, Ukrainians often post various jokes on social media – this represents one of the mechanisms for coping with stress, known as the use of humor as a defense response. Humor helps to reduce tension by creating a psychological distance from traumatic experiences. Mocking the threat can provide a sense of control over the situation and mitigate the emotional impact of stress. However, it is important to recognize that for some individuals, particularly those heavily affected by stressful events, such humor may not serve as an effective coping strategy, and additional support and resources may be required for recovery.

People resort to humor in response to alarms and missile threats for several reasons:

- humor allows the creation of psychological distance from the threat, helping to diminish its immediate emotional impact. Essentially, laughing at fear involves identifying something absurd or trivial within it, temporarily reducing its perceived significance;
- humor serves as a means of maintaining normalcy in abnormal circumstances. The use of jokes and irony helps sustain social connections and a sense of com-

munity among individuals facing shared challenges;

- humor is a defense mechanism that helps cope with the fear and helplessness provoked by alarms and missile attacks. By joking, we confront stress by finding something in difficult situations that can evoke joy or at least a smile.

In this way, humor becomes a protective shield that separates individuals from real danger. However, there is a downside: it can reduce empathy toward others, particularly those who do not laugh, weaken the connection to reality, and suppress other emotions. At this stage, it is no longer a matter of resilience; it constitutes a form of maladaptive or destructive adaptation.

To manage stress and anxiety, it is important to develop healthy coping strategies. These may include techniques such as deep breathing, meditation, yoga, dancing, drawing, or even simple outdoor walks, which help calm the mind and reduce feelings of anxiety. Establishing a daily routine aligned with hormonal cycles, ensuring sufficient sleep, and maintaining a balanced diet can also be beneficial. Equally important is maintaining connections with loved ones and sharing personal experiences. In the evening, to stabilize the nervous system, practices such as aromatic baths (when possible), listening to relaxing music, and other calming activities can be helpful.²⁴

Children are particularly sensitive to stress and anxiety arising from air raid alarms. They may experience fear, confusion, and even sleep disturbances. Therefore, it is essential to talk with children about their experiences and provide them with a sense of safety and security. It is important to explain that the alarm is a safety measure rather than something that should provoke additional fear. Children also need support in expressing their feelings through draw-

ing, play, or conversation, and it is crucial to maintain routines that can provide stability in their lives.

Children require more physical affection, as hugs promote the release of “happiness” hormones. Playing calming music can help stabilize the nervous system, and it is important not to withhold significant information, especially when a child asks questions. Adults should be sincere with children: acknowledging both their own emotions and the child’s feelings, and not dismissing fear or anxiety. It is essential to help children develop the belief that they can cope with challenges and overcome difficulties in life.

It is worth highlighting separately the issue of children who are outside Ukraine. Nearly 29% of students combine attendance at host-country schools with Ukrainian online instruction, creating an additional cognitive and logistical burden, with over a quarter of these students dedicating more than three hours per day to supplementary learning. Such arrangements may contribute to student burnout and a decline in learning quality.²⁵

This dual-track learning trajectory not only increases academic overload, but also blurs the boundaries between study and rest, leaving children with little time for socialization, recreation or emotional recovery. Continuous transitions between two curricula – often based on different pedagogical approaches, assessment systems, and linguistic environments – require sustained cognitive switching, which is associated with higher levels of stress and mental fatigue. As a result, many students report symptoms of chronic tiredness, decreased motivation, and feelings of inadequacy when they are unable to maintain high performance in both systems simultaneously.

Psychologically, these pressures are compounded by the broader context of displace-

ment, uncertainty about the future, and prolonged separation from familiar peer groups and cultural environments. Children frequently experience anxiety related to academic expectations from both the host country and Ukraine, often fearing that “falling behind” in either system may jeopardise their future reintegration at home or opportunities abroad. This creates a state of constant psychological tension and identity conflict, where belonging to two educational spaces is accompanied not by enrichment but by emotional fragmentation.

As Samuel Kamande points out: “Safe, child-friendly spaces in schools and the provision of psychosocial support are among the effective strategies reported by humanitarian workers to mitigate the adverse effects of displacement and foster resilience among child refugees”.²⁶

Experts also emphasize the importance of flexible learning models, psychological support, and clear guidance for families on prioritizing educational goals. Structured counseling, peer support groups, and collaboration between Ukrainian and host-country schools can help reduce academic overload and support emotional resilience. Providing children with regular access to qualified school psychologists, culturally sensitive mentors, and supervised extracurricular activities significantly improves their ability to cope with challenges and strengthens their sense of security and continuity despite displacement.

Discussion

Maintaining and enhancing the quality of education represents a significant challenge for a country at war. Ukraine has gained a unique experience in organizing the educational process under conditions of full-scale war. This experience encompasses multiple

dimensions, ranging from the organization of online learning to the provision of psychological support. It has also accelerated and optimized the adoption of modern technologies, making it a valuable example for other countries in developing flexible and resilient educational systems. Indeed, Ukraine demonstrates how quickly and effectively the educational process can be adapted to crisis situations through the use of digital technologies and innovative approaches.

This process underscores that education is not merely a sector in need of protection, but also a powerful tool that Ukraine employs in its struggle and in building its future. Education has become a cornerstone of resilience, ensuring the continuity of life under wartime conditions.

Among the key challenges faced by the Ukrainian educational system during the full-scale invasion are interruptions in learning caused by shelling, air-raid alerts, forced evacuations, or sheltering, all of which systematically disrupt the rhythm of classes. Research indicates that educational losses due to air-raid alerts in certain regions can exceed those caused by the pandemic or conventional remote learning.²⁷ Moreover, such interruptions contribute to the cumulative “lag” in learning, particularly in core subjects that require systematic study, such as mathematics and languages.

Another significant challenge is the risk to the lives and health of participants in the educational process. Students, teachers, and other staff members of educational institutions are exposed to danger from missile strikes, landmines, unstable electricity supply, and the destruction of buildings. Under such conditions, many institutions are compelled to partially or fully suspend in-person learning to ensure the safety of children. From the very first months of the war, numerous institutions have implement-

ed hybrid or remote learning formats; however, this requires ensuring technological readiness, including internet coverage, digital devices, methodological resources, and teacher training. Zaverukha, Pechenizka and Silyutina,²⁸ in their study, they argue that the effectiveness of remote learning depends on three components: hardware, software, and the readiness of participants (both teachers and students). At the same time, the methodological recommendations of the Ministry of Education and Science recognize that educational institutions have the right to organize the educational process in in-person, remote, or hybrid formats depending on the prevailing safety situation.²⁹

Children who are frequently exposed to continuous stress due to danger often lose the ability to concentrate, exhibit reduced motivation, and experience anxiety, panic, or depression.

An equally important challenge for the Ukrainian education system is the psychosocial trauma experienced by students, teachers, parents, and others. Children who are frequently exposed to continuous stress due to danger often lose the ability to concentrate, exhibit reduced motivation, and experience anxiety, panic, or depression. Psychological disturbances are already recognized as one of the primary factors contributing to educational “gaps”, since even access to lessons does not guarantee effective learning if students are unable to engage with the material emotionally and cognitively.

The education system has had to rapidly adapt to these changes, providing in-person learning where it is safe or promptly switching to alternative formats or either

remote or hybrid. According to the Ministry of Education and Science Order No 563 of May 15, 2023, institutions are allowed to modify the form of educational delivery throughout the academic year depending on the prevailing safety situation.³⁰ For example, in some regional administrations in February 2023, a recommendation was issued to switch to remote learning from February 22 to 24 as a preventive measure on the anniversary of the full-scale invasion. This approach demonstrates the flexibility of the management model: in areas where it is safe, in-person instruction is maintained; where threats exist, remote or hybrid formats are implemented, taking into account available resources and safety considerations.

Strategic approaches to organizing the educational process include:

Creating a safe educational environment. This means that educational institutions must have an approved safety and evacuation plan, access to shelters or agreements for the use of protective structures, and a stock of essential supplies (first aid kits, water, lighting, communication tools).

Ensuring learning continuity. Institutions must be able to switch to remote or hybrid learning when in-person instruction is not possible. Methodological recommendations³¹ indicate that for students located abroad or in occupied territories, individualized forms of education may be applied.

Ongoing preparation of teachers, students, and parents for emergency situations. This involves briefings, drills, practicing evacuation routes, and following established procedures during air-raid alerts. For example, in collaboration with the United Nations Children’s Fund (UNICEF) and the State Emergency Service of Ukraine, instructions titled “Procedure for Action During an Air-Raid Alert in Schools” have been developed.³²

In the context of the armed aggression of the Russian Federation against Ukraine, the issue of having a clear action algorithm in response to security threats has become systematic at all levels of education – from preschools to universities. The purpose of these algorithms is to ensure the life and health of participants in the educational process by implementing standardized rules of behavior in the event of civil protection alerts, such as “Attention everyone!” or “Air-raid alert”.

One of the foundational regulatory documents is the “Sample Procedure for Population Action in Response to Civil Protection Alerts, Attention Everyone! and Air-Raid Alert”, developed by the State Emergency Service of Ukraine. This document defines the main stages of population behavior in the event of a threat: preparing for possible evacuation, informing personnel, checking shelters, and conducting drills.³³ Within educational institutions, these principles are codified in internal regulations that govern the actions of administrators, teaching staff, students, and support personnel.

At the level of general secondary education, it is recommended to conduct air-raid drills at least once per semester, encompassing both instructional briefings and practical exercises tailored to students of varying ages. The standard operational procedure in response to an “Air-Raid Alert” signal includes the following steps:

- immediate suspension of instructional activities and organized relocation of students to designated shelters;
- verification of attendance through roll-call procedures;
- deactivation of electrical equipment and closure of windows;
- maintenance of discipline and psychological stability among students;

- resumption of instructional activities only upon issuance of the official all-clear signal.³⁴

Similar recommendations are specified for preschool educational institutions, where action algorithms are developed with consideration of the age-related and physiological characteristics of children.

In higher education institutions, the operational procedures are further detailed, taking into account the large student population, the complex structure of campus buildings, and the presence of laboratory equipment. The Ministry of Education and Science, in Letter No 1/17310-23 dated November 3, 2023, recommends that universities develop “Plans for Ensuring the Safety of the Educational Process”, which should include sections on the organization of shelters, evacuation routes, designated responsible personnel, and backup communication systems.³⁵ The majority of universities implement their own regulations, coordinated with local civil protection authorities, which provide for the automated notification of students through electronic systems, including electronic gradebooks, messaging platforms, and internal portals.

Coordination of actions across all levels of the education system ensures a unified response during emergencies. Empirical evidence indicates that schools and universities with clearly defined evacuation routes, adequately equipped shelters, and systematically conducted drills demonstrate significantly better outcomes during actual threats, including reduced injuries, lower levels of panic, and higher readiness to act under crisis conditions.

Thus, the operational procedures for responding to alert signals constitute not merely a formal document but a fundamental component of the safety culture within the educational environment. Their effectiveness

depends on three factors: the regularity of drills, the accountability of the administration, and the psychological preparedness of participants in the educational process. The cultivation of this culture is essential for preserving the life and health of students under wartime conditions.

A primary advantage under conditions of war is the accessibility of online education. This modality is independent of the geographic location of students and educators, requiring only technical infrastructure and Internet access. Online formats mitigate risks associated with shelling, temporary closure of educational institutions, the mobility of internally displaced persons, and restricted access to classrooms.

In addition to accessibility, online education facilitates the implementation of innovative educational technologies, including interactive platforms, virtual and augmented reality, project-based and game-based learning elements, and artificial intelligence for personalized learning. These tools increase student engagement, motivate active participation, and help overcome the pressures of traumatic contexts such as war, stress, and anxiety. For example, research shows that virtual educational environments provide personalized learning, immediate access to multimedia content, and active interaction between students and teachers.³⁶

However, online education also presents significant limitations, particularly in the context of wartime education. First, there is the issue of technological readiness: unstable electricity supply, internet outages, and limited access to computers or tablets, especially among internally displaced families or in rural areas. For example, the results of the “Smart kids” experiment indicated that the primary barriers to remote learning were internet disruptions, insufficient technical provision for students and instructors, and limited access to computers at home.³⁷

Second, the online format requires a high level of self-discipline and motivation from students, as well as effective instructional organization by teachers. Without a clear structure and regular interaction, the risk of passive learning, academic lag, or even disengagement from the curriculum increases significantly.

Third, social interaction and the development of “soft skills” (communication, collaboration, teamwork) are often diminished or lost in online environments. Students who engage in prolonged remote learning may experience isolation, reduced motivation, and difficulties in establishing peer relationships.

Another critical issue is hypodynamia, or reduced physical activity, during remote learning. Students are required to remain in front of computer or smartphone screens for extended periods, which negatively affects physical condition, posture, vision, cardiovascular health, and psycho-emotional well-being. Experts emphasize that physical inactivity may be a long-term consequence of online education if programs that promote physical activity and movement breaks are not included, even during distance learning.³⁸

In this regard, it is critically important to develop health-preserving skills in all participants in the educational process – pupils, students of higher educational institutions, teachers and parents. This involves the formation of a conscious approach to one’s own physical and psycho-emotional state, adherence to the daily routine, proper nutrition, the inclusion of active breaks between lessons and the organization of the working space in accordance with ergonomic standards. The development of a health-preserving culture is not only a pedagogical but also a social goal, since it underlies the sustainability of the educational environment in conditions of prolonged instability.³⁹

Thus, online education in the context of war constitutes a critically necessary ele-

ment of educational resilience; however, its effectiveness directly depends on the technical, methodological, and psychological preparedness of participants, as well as on maintaining a balance between digital and physical activity and fostering health-preserving skills. Although online education offers significant advantages – accessibility, flexibility, and innovativeness – its successful implementation under wartime conditions relies on the systematic preparation of the educational institution, including the provision of technical equipment and internet access, methodological adaptation, psychological support, and facilitation of interaction. In other words, the online format should be considered a component of a broader strategy for ensuring resilient education during wartime challenges, rather than a standalone solution.

Psychological support acquires particular significance in the context of military aggression and online learning, as the contemporary educational system operates under conditions of a dual crisis – technological transformation and wartime instability. In education that transitions into the virtual space, participants encounter informational overload, digital fatigue, social isolation, and a lack of direct human interaction, all of which heighten vulnerability to anxiety and depressive states. These risks are further exacerbated by the backdrop of war, which imposes additional psycho-traumatic strain due to constant threats, losses, instability, forced displacement, and the disruption of daily routines. Such conditions adversely affect cognitive functions (attention, memory, concentration), emotional regulation, and motivation for learning, and may trigger acute or chronic stress responses, anxiety, depression, or post-traumatic tension.

Under these circumstances, psychological support functions as an integrated model of intervention encompassing diagnostic assess-

ment (using standardized instruments for evaluating anxiety, depression, and burnout), corrective and developmental interventions (training in relaxation, mindfulness, and self-regulation), preventive and educational initiatives (courses, brochures, infographics), as well as counseling support (individual and group online sessions). In its basic form, such support may be implemented through Psychological First Aid (PFA) – a model of initial psychological assistance recommended by the World Health Organization (WHO) and other international bodies as a foundational intervention in crisis and conflict settings. This model is based on the principles of “Look, Listen, Link” (observe the need, listen with empathy, and connect individuals to additional resources) and emphasizes a humane, sensitive, and contextually adaptive approach. At the same time, it is essential to integrate the local context, cultural characteristics, and community resources into the implementation process.⁴⁰

To support this model, thematic studies are being conducted in Ukraine – for instance, research on the psychological state of teachers under wartime conditions, which indicates a high prevalence of anxiety, depression, and panic attacks among educators and underscores the urgent need for psychological support.⁴¹ Additionally, programs have been developed to assist higher education students during the war, wherein psychological support serves as a mechanism for maintaining mental health and fostering adaptive skills. Initiatives reflected in scholarly-methodological collections and educational programs emphasize the necessity of incorporating the psychological component into educational planning and organizational strategies during crisis periods.⁴²

In the context of the full-scale military aggression against Ukraine, the concern for mental health has emerged as one of the fundamental conditions for survival and

adaptation. Within this framework, the nationwide Mental Health Program “How Are You?” (“Ty Yak?”) has been launched, aimed at fostering a culture of mental health awareness and care within Ukrainian society, as well as developing a system of accessible psychosocial services. The program’s key objective is not only to provide assistance to those already experiencing psychological distress but also to prevent the development of severe mental disorders through access to self-help techniques, informational resources, and online support. For instance, the program’s online portal contains collections of practical recommendations and exercises, as well as contact information for free helplines. Moreover, the program is being integrated across multiple sectors – including healthcare, social policy, education, and defense – which is emphasized in official sources.⁴³ The program targets a broad audience that encompasses the general population of Ukraine – including children, adolescents, adults, veterans, internally displaced persons, and families. The central emphasis lies in the understanding that mental health constitutes a vital resource enabling individuals to adapt and function effectively under wartime conditions.

At present, it remains difficult to assess the program’s effectiveness quantitatively due to its relative novelty and the inherent challenges of data collection during wartime. Nevertheless, available evidence indicates that the program has already reached hundreds of thousands of citizens through online platforms and hotlines, and regional service-delivery pathways have been developed in accordance with the needs of local communities.

The “How Are You?” (“Ty Yak?”) initiative represents a systemic response to the complex realities of contemporary Ukrainian society, combining digital tools, institution-

al integration, and strategic communication to strengthen the nation’s mental health. It demonstrates that mental well-being is no less essential than physical health, particularly in times of prolonged crisis, and establishes a foundation for the development of a resilient civil society.

The outcomes of a systematic psychological support framework include a reduction in anxiety levels, an increase in learning motivation, the development of emotional self-regulation skills, and the strengthening of social cohesion within educational communities. Through the implementation of such programs, participants in the educational process are able not only to stabilize their psycho-emotional state but also to acquire adaptive coping mechanisms essential for functioning under conditions of prolonged instability. Psychological assistance contributes to the formation of a conscious attitude toward personal and collective experiences, as well as to the development of empathy, tolerance, and mutual support among teachers, learners, and parents.

In the long-term perspective, these processes foster the development of a resilient and psychologically mature personality capable of continuous learning, reflection, and self-improvement, even in times of crisis. Consequently, psychological support during online learning under conditions of armed aggression attains strategic significance: it functions not merely as a tool for preserving mental health but as a catalyst for the restoration of the educational environment, the cultivation of a culture of trust, support, and mutual understanding. In a broader societal context, it constitutes a foundation for building social capital that determines the potential for collective resilience and national recovery in the post-war period.

Conclusion

Contemporary Ukrainian education represents far more than quantitative indicators — it embodies millions of personal narratives of teachers, students, and parents who, despite the ongoing war, continue to make a conscious choice in favor of knowledge. It is a teacher conducting lessons from a shelter, maintaining communication with students despite poor or unstable Internet connection; a child studying online from abroad to preserve their native language and cultural identity; and parents seeking a safe school without losing faith in the future.

Education has become a front of resilience. It not only transmits knowledge but also safeguards national identity, fosters civic consciousness, and offers children the hope of tomorrow. Each lesson conducted under challenging conditions constitutes an act of resistance; every school that opens its doors becomes a symbol of hope; and every child who continues to learn stands as living proof that Ukraine endures, fights, and builds its future.

Despite the extremely difficult circumstances, the Ukrainian educational system continues to function effectively, finding viable solutions to overcome emerging challenges. The experience of online education gained during the global pandemic enabled a swift adaptation to distance learning under war-time conditions. However, the adverse effects of prolonged online education must be taken into account, and measures for their mitigation should be implemented. Particular attention must be paid to the issue of psychological support for all participants in the educational process, as prolonged psychological strain diminishes cognitive abilities and leads to overall exhaustion of the body.

A separate and highly sensitive area of future research should address the provision

of educational services to learners residing in temporarily occupied territories. This issue remains complex and precarious, as the occupying Russian authorities prohibit the use of the Ukrainian language, literature, and educational standards. Students who continue to attend online classes offered by Ukrainian educational institutions in such regions face significant personal risks.

Ultimately, education in Ukraine has become a front line of resilience. It not only preserves knowledge but also sustains identity, cultivates national consciousness, and symbolizes endurance and hope. Every functioning classroom, every engaged teacher, and every learning child affirms that Ukraine lives, resists, and rebuilds its future even amid the realities of war.

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Notes

1. UNICEF. (2025). *Education under attack*, <https://www.unicef.org/education-under-attack>.
2. Ministry of Education and Science of Ukraine. *State of educational institutions in conflict-affected regions*. Kyiv, <https://mon.gov.ua/en/educational-indicators-dashboard>.
3. UNESCO. (2025). *Education for Ukrainian refugee learners in European host countries*. Paris: UNESCO, <https://www.unesco.org/en/ukraine-war/education>.
4. Ministry of Education and Science of Ukraine. (2024). *War and Education: 2 Years of Full-scale Invasion – Report on the Results of the Study*. Kyiv: Ministry of Education and Science of Ukraine, <https://lnk.ua/9e0PEmWVp>.
5. World Bank. (2022). *Education: Impact of the War in Ukraine*, <https://lnk.ua/k4kjr9bNL>
6. UNICEF. (2022). *Education in emergencies: Lessons from Ukraine*. New York: UNICEF, <https://www.unicef.org/ukrainelen/topics/education-emergencies>
7. Ukraine – Fourth Rapid Damage and Needs Assessment (RDNA4): February 2022 – December 2024 (English), <https://lnk.ua/y4XBXogVX>
8. Children of war in Ukraine, <https://saveschools.in.ua/en/>.
9. Trachuk M. Education in Ukraine during the war: from crisis to prospects (2025), <https://ua.news.ua/ukraine/osvita-v-ukrayini-v-umovakh-viini-vid-krizi-do-perspektiv>.
10. Learning and School Reforms Continue in Ukraine Despite War Challenges (2025), <https://www.worldbank.org/en/news/feature/2025/03/25/learning-and-school-reforms-continue-in-ukraine-despite-war-challenges>.
11. Ukrstat. Network and activities of educational institutions. <https://stat.gov.ua/en/datasets/network-and-activities-educational-institutions>.
12. Ibid.
13. Lisovy O. (2025) Infrastructure of Change: How the State Creates a Safe Educational Environment During War, <https://mind.ua/openmind/20290570-infrastruktura-zmin-yak-derzhava-stvoryue-bezpechne-osvitne-seredovishche-pid-chas-vijni>.
14. UNESCO. (2025). *UNESCO warns on dramatic increase in attacks against schools in 2024*, <https://www.unesco.org/en/articles/unesco-warns-dramatic-increase-attacks-against-schools-2024>.
15. World Bank. (2025). *Ukraine Rapid Damage And Needs Assessment (Rdna4)*, <https://documents1.worldbank.org/curated/en/099022025114040022/pdf/P180174-ca39eccd-ea67-4bd8-b537-ff73a675a0a8.pdf>.
16. Gorbunova, Y. (2022, December 6). *Ukraine: Russian attacks on energy grid threaten civilians*. Human Rights Watch. <https://www.hrw.org/news/2022/12/06/ukraine-russian-attacks-energy-grid-threaten-civilians>.
17. Office of the United Nations High Commissioner for Human Rights. (2024, September 20). *Attacks on Ukraine's energy infrastructure: Harm to the civilian population*. OHCHR. https://ukraine.ohchr.org/sites/default/files/2024-12/ENG_Attacks_on_Ukraine%20%80%99s_Energy_Infrastructure_Harm_to_the_Civilian.pdf.
18. UNICEF. (2024). *Situation analysis of Ukrainian children affected by the war: Summary report*. UNICEF. https://www.unicef.org/ukrainelen/media/49211/file/UNICEF_SitAn_Summary_2024-ENG.pdf.
19. UNESCO. (2024, June 18). *New data insights reveal both progress and challenges for Ukrainian refugee students' education in Europe*. UNESCO. <https://www.unesco.org/en/articles/new-data-insights-reveal-both-progress-and-challenges-ukrainian-refugee-students-education-europe>.
20. In order not to waste time: how Ukraine provides education for schoolchildren and why the European Union created a "coalition to assist the education sector of Ukraine", <https://makypilo.ua/teksty/shchoby-ne-vtrachaty-chas-yak-ukraina-zabezpechuie-navchannia-shkoliariv-i-chomu-yevropeyskiy-soiuz-stvoryv-kolitsiuiu-dopomohy-osvitnii-sferi-ukrainy/>.
21. Ibid.
22. Regarding certain issues of organizing the educational process under martial law. Letter of the Ministry of Education and Science No. 1/17310-23 dated 03.11.23, https://osvita.ua/legislation/Ser_osu/90390/.
23. Op. cit., In order not to waste time, see note 20.
24. Why Ukrainians are getting used to air raids and what to do about it. <https://www.sestry.eu/statti/chomu-ukrayinci-zvikayut-do-povitryanib-trivog-i-shcho-z-cim-robiti>.

25. Op. cit., UNESCO. (2025). *Education for Ukrainian refugee learners in European host countries*, see note 3.
26. Kamande, S. (2025). The psychological and educational impact of child refugees displaced by conflict and persecution. <https://doi.org/10.13140/RG.2.2.29183.73120>.
27. Vox Ukraine. (2025). Lost lessons due to air alarms: how much and what can be done. *Vox Ukraine*. <https://voxukraine.org/vtracheniuroky-cherез-povitryani-tryvogy-skilky-tashho-mozhna-zrobyty>.
28. Zaverukha Y. G., Pechenizka S. S., and Silyutina I. M. (2023). Distance learning as a strategic response to the challenges of the Russian-Ukrainian war: an analysis of effectiveness and opportunities. *Academic Visions*. <https://academic-vision.org/index.php/av/article/view/812>.
29. Ministry of Education and Science of Ukraine. (2023). Order No. 563: Methodological recommendations on certain issues of obtaining education in general secondary education institutions under martial law. <https://zakon.rada.gov.ua/go/v0563729-23>.
30. Ibid.
31. Ibid.
32. Algorithm of actions during an air raid at school and activities for children in shelters Instructions for parents and teachers. <https://www.unicef.org/ukraine/alarm-while-study-actions>.
33. State Emergency Service of Ukraine. (2022). Sample algorithm of actions of the population according to civil defense alert signals “Attention everyone!”, “Air alarm”. <https://dsns.gov.ua/upload/8/2/9/4/4/7/CPoh768iND2aF3gGhmBsCBE5wSp6bBP74TCcwiD.pdf>.
34. Ministry of Education and Science of Ukraine. (2023, November 3). Letter No. 1/17310-23 “Regarding certain issues of organizing the educational process under martial law”. https://osvita.ua/legislation/Ser_osv/90390/.
35. Ibid.
36. Bondarenko, O., Pakhomova, O., and Lewoniewski, W. (2020). The didactic potential of virtual information educational environment as a tool of geography students training. *arXiv*. <https://arxiv.org/abs/2002.07473>.
37. Lytvynova, S., and Demeshkant, N. (2022). Distance learning in primary school during the COVID-19 pandemic: results of the “SMART KIDS” experiment. *arXiv*. <https://arxiv.org/abs/2204.03472>.
38. Plachynda T., Zakharova O. Physical training of future specialists in conditions of distance learning. *Science in sport: modern issues*. – 2022, No 3 (7), pp. 215-226 DOI:10.53068/25792997-2022.3.7-215.
39. Plachynda T., Zhelieznova T., Bondarchuk S. Health Education in the Context of Social Transformations. *Scientific Bulletin of Izmail State Humanitarian University: Collection of Scientific Works. Series: Pedagogical Sciences*. Izmail: RVV IZHU, 2023. Issue 62. Pp. 208-216 DOI 10.31909/26168812.2023-(62)-23.
40. World Health Organization, Mental health in emergencies. (2025) <https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies>.
41. Ignatovych, O. M. (2023). Psychological support of a teacher in wartime [Information and analytical review] (NBU “Institute of Innovative and Postgraduate Education”). *Bulletin of the National Academy of Sciences of Ukraine*. <https://lnk.ua/aVp9wmWND>.
42. Educational process in wartime and post-war conditions: challenges, rules, prospects: materials of the All-Ukrainian scientific and pedagogical advanced training, March 4 – April 14, 2024. Lviv-Toruń: Liha-Press, 2024. 368 p. https://cuesc.org.ua/images/informlist/Makem%20advanced_training_UDU.pdf.
43. Ministry of Community and Territorial Development of Ukraine. (2023, July 4). «Ty yak?» – All-Ukrainian mental health program. <https://mindev.gov.ua/news/34479-ti-yak-trivaje-vseukrayinska-programa-mentalnogo-zdorovia>.