

## Educational Resilience in Ukraine during Armed Conflict

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### Abstract

Educational resilience during armed conflict has emerged as a critical area of scholarly inquiry, with Ukraine providing an unprecedented case study of how a higher education system can maintain functionality amid sustained military aggression. This study examines the mechanisms, challenges, and outcomes of educational resilience in Ukrainian universities following the full-scale Russian invasion of February 2022, drawing upon institutional policy analysis, student narratives, and empirical evidence from multiple case studies across the country. Ukraine's approach is distinguished by the rapid digital transformation of teaching and learning, the forced relocation of 29 higher education institutions from occupied territories, the development of flexible legal frameworks under martial law, and the emergence of what this study terms "shared resilience" a dynamic interaction between institutional regulatory flexibility and grassroots student and faculty initiatives. The research identifies four critical dimensions of resilience: infrastructural adaptation through digital technologies, organisational transformation through regulatory flexibility, individual coping through the mobilisation of everyday academic practices, and the psychosocial support systems necessary for sustaining educational engagement under extreme stress. Findings indicate that Ukrainian higher education has demonstrated remarkable adaptability, with institutions implementing hybrid learning models, flexible assessment procedures, and alternative examination formats while supporting students and faculty experiencing profound psychological stress. However, persistent challenges include unequal access to digital resources, the compounding of pre-existing academic stressors with war-related disruptions, incomplete institutional transformation that transfers adaptation burdens to individuals, and significant psychosocial impacts on both learners and educators. The study concludes that sustainable educational resilience during armed conflict requires not only technological infrastructure and regulatory flexibility but also systematic psychosocial support, equitable resource distribution, and institutional cultures that genuinely share the burden of adaptation rather than merely delegating it to individual initiative.

### Keywords

Educational Resilience, Armed Conflict, Ukrainian Higher Education, Digital Transformation, Shared Resilience, Martial Law, Student Coping Strategies, Institutional Adaptation, Psychosocial Support, Educational Continuity



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## INTRODUCTION

The full-scale Russian invasion of Ukraine in February 2022 precipitated one of the most severe disruptions to higher education in modern European history, yet the response of Ukrainian universities has demonstrated extraordinary resilience that challenges and extends existing theoretical frameworks of educational adaptation during crises. The Russian-Ukrainian war has profoundly impacted various aspects of Ukrainian society, with the higher education sector experiencing significant disruptions that extend beyond the destruction of physical infrastructure to encompass systemic reconfiguration, mass displacement of academic communities, and the psychological trauma of sustained military aggression (Gajda et al., 2023). This introduction provides a narrative overview of the theoretical foundations, empirical developments, and contextual specificities that inform the study of educational resilience in Ukraine during armed conflict, situating the Ukrainian experience within broader scholarly discourse on crisis education and resilience theory.

The concept of resilience has evolved substantially since its initial applications in ecology and developmental psychology, expanding from individual-level trait conceptualisations to encompass organisational, community, and systemic dimensions. In higher education contexts, resilience encompasses the capacity of both individuals and institutions to maintain functionality in the face of disruptions, with recent scholarship emphasising that resilience emerges not from individual capacities alone but through dynamic interactions between students and their educational environment (Theron, 2021; Ellis & Johnston, 2024). The Academic Resilience Model proposed by Durso et al. (2021) identifies three interconnected systems influencing student resilience: the individual system comprising personal characteristics and prior experiences, the academic system encompassing the institutional environment and relationships with faculty and peers, and the external system including family demands, work obligations, and broader societal conditions. In the context of war, these systems face extraordinary pressures that require students to mobilise coping mechanisms far beyond those necessary in peacetime, while simultaneously demanding that institutions adapt their structures and practices to sustain educational continuity.

The international literature on education in armed conflict provides important comparative reference points for understanding the Ukrainian case. Research on Syrian higher education during conflict has identified interconnected challenges spanning violence, mental health issues, resource limitations, and questions about

education's relevance, documenting how security concerns combined with infrastructure damage and psychological trauma create complex barriers to learning (Tozan, 2023). Studies of Yemen's higher education system similarly document multi-level disruptions where security concerns, economic hardship, and displacement compound to undermine educational access and quality (AlMunifi & Aleryani, 2021). The concept of "compounded adversity" where everyday academic stressors interact with and are amplified by crisis-specific stressors has been identified as a characteristic pattern in conflict-affected educational systems, requiring responses across multiple levels (Southwick et al., 2014). These comparative contexts illuminate both the universal challenges of education during armed conflict and the distinctive features of Ukraine's response.

Ukraine's higher education system entered the full-scale invasion with several characteristics that shaped its capacity for resilience. Unlike many previously studied conflict-affected contexts, Ukraine's higher education system possessed high institutional development, strong international integration, and advanced digitalisation resulting from the digital transformation accelerated during the COVID-19 pandemic (Bakhmat et al., 2022; Antoniuk, 2023). This positioning created infrastructural and competency foundations that facilitated rapid adaptation to wartime conditions, while also generating expectations and standards that made the disruption particularly acute. The cumulative nature of crisis response in Ukraine is significant: the education system had not yet fully recovered from the difficult period of the global pandemic when the war began, creating what Budanov and Rodionov (2023) describe as a situation of compounded crisis where each layer of adversity builds upon existing adaptive mechanisms rather than creating entirely new ones.

The physical destruction of educational infrastructure represents one of the most visible impacts of the war. As of February 2024, 21% of Ukraine's higher education institutions have been damaged or destroyed, while research institutions suffered damage in 31% of cases (Carter, 2024). Within the first two months of the full-scale invasion, 45 professional pre-higher and higher education institutions were damaged, and two were completely destroyed, resulting in the loss of nearly 15% of the country's research infrastructure (European University Association, 2022). Beyond physical damage, the territorial organisation of the educational landscape has been fundamentally transformed, with 29 higher education institutions and 64 separate structural units forcibly relocated from occupied or frontline territories to safer regions, primarily affecting institutions in the Donetsk, Luhansk, Zaporizhzhia, and Kherson regions, with many experiencing their second relocation since the initial

conflict began in 2014 (Ministry of Education & Science of Ukraine, 2023; Sokolenko, 2023).

Even institutions located far from active combat zones have experienced substantial operational challenges that have tested the limits of educational resilience. Systematic Russian attacks on Ukraine's energy infrastructure have caused regular power outages lasting several hours daily across almost all regions of the country, disrupting teaching and learning processes particularly for institutions relying on digital technologies for remote education (Marchenko, 2023). Frequent air raid alerts necessitate evacuations to shelters, interrupting classes and examinations and requiring educators to develop specialised approaches for helping students manage anxiety during emergency situations. Travel restrictions for military-age men have limited academic mobility, while mandatory military registration requirements have created additional administrative burdens for certain categories of students and faculty (Lviv National University, 2024). Legal debates about possible limitations on constitutional rights to education during martial law have introduced additional uncertainty (Volyn Post, 2023).

Despite these profound challenges, Ukrainian higher education institutions have demonstrated remarkable adaptability, implementing advanced digital technologies and flexible learning approaches to maintain educational continuity (Sokolenko, 2023). The reforms of higher education in Ukraine from 2022 to 2025 have focused on improving the quality of educational services, integration into the European Higher Education Area, and adaptation to modern challenges under martial law, including amendments to the Law of Ukraine "On Higher Education" that give students who join the Armed Forces the right to keep their study place with automatic academic leave (Eurydice, 2024). The Strategy of Higher Education Development in Ukraine for 2022-2032 established strategic goals encompassing effectiveness of management, trust of citizens and business in educational and research activities, and ensuring quality educational and research activities accessible to various population segments including residents of temporarily occupied territories (Erasmus Plus Ukraine, 2024).

The theoretical framework guiding this study integrates multiple complementary perspectives on resilience. Masten's (2001) concept of "ordinary magic" the mobilisation of everyday adaptive systems to meet extraordinary challenges provides a lens for understanding how Ukrainian students repurposed existing academic practices for wartime conditions. Ungar's (2018) conceptualisation of systemic resilience as "principles and processes for a science of change in contexts

of adversity" emphasises how adaptive systems function dynamically when facing significant challenges, with resilience emerging through interactions between systems rather than through any single system's efforts. Pinheiro and Young's (2017) organisational resilience framework, which distinguishes between strategic and resilient university models, illuminates how Ukrainian institutions have transformed from standardised, rigidly procedural organisations toward more flexible, adaptive configurations. Holdsworth et al.'s (2018) interactive model of resilience in higher education provides the overarching framework, conceptualising educational resilience as emerging at the intersection of individual capabilities and institutional environments.

In conclusion, Ukraine's higher education system during armed conflict presents a unique and urgent case for understanding educational resilience under extreme conditions. The convergence of physical destruction, systemic displacement, energy infrastructure attacks, and psychological trauma with the pre-existing challenges of academic life has created what this study terms "compounded adversity" a pattern where everyday educational stressors are intensified by crisis-specific disruptions, demanding responses across individual, institutional, and systemic levels. This study examines the mechanisms through which Ukrainian universities have maintained educational continuity, the challenges that persist, and the theoretical insights that emerge from this extraordinary case.

## **METHODS**

This study employed a qualitative multiple case study design to investigate educational resilience in Ukrainian higher education during armed conflict, drawing upon student narratives, institutional documentation, and policy analysis to develop a comprehensive understanding of how universities maintain educational functionality under extreme conditions. The methodological approach was informed by Yin's (2018) case study methodology, which is particularly suited to examining contemporary phenomena within their real-life contexts when the boundaries between phenomenon and context are not clearly evident. Given the complexity of educational resilience as a multi-level phenomenon encompassing individual coping strategies, institutional adaptations, and systemic policy responses a case study approach was deemed most appropriate for capturing the nuanced dynamics of Ukraine's wartime education system.

The research examined four distinct institutional cases purposively selected to represent diversity in geographic location relative to combat zones, institutional type, and exposure to war-related disruptions. The cases comprised Ivan Franko National

University of Lviv, functioning outside the direct war zone but experiencing significant consequences of the conflict; relocated institutions from the Donetsk and Luhansk regions that had undergone forced displacement; Kyiv-based institutions subject to regular air raids and energy infrastructure attacks; and institutions in relatively safer western regions that received large numbers of internally displaced students and faculty. This selection enabled both within-case analysis, to understand the unique characteristics of resilience in each context, and cross-case analysis, to identify common patterns and divergent practices across the Ukrainian higher education landscape.

Data collection involved three primary methods: analysis of student written memoirs, semi-structured interviews, and document analysis of institutional and policy materials. The student memoir data were drawn from a published qualitative study conducted at Lviv University during the winter examination session of 2022-2023, in which students were invited to write recollections about their experiences during the exam session in wartime (Gajda et al., 2023). This method of data collection is recognised in the social sciences for providing valuable material for in-depth analysis, and the asynchronous, remote nature of memoir collection was particularly appropriate given the practical constraints of the wartime context, including limitations on direct contact, pervasive security concerns, and energy supply uncertainty. The memoirs captured subjective experiences, meanings, and adaptive processes within the context of armed conflict, providing rich phenomenological data that quantitative methods could not access.

Semi-structured interviews were conducted with 24 participants across the four cases, including students, faculty members, educational administrators, and quality assurance officers. The interview protocol was developed following a review of existing literature on educational resilience and crisis education, and was piloted with two participants prior to full data collection. Interviews explored participants' experiences of wartime educational disruptions, the adaptation strategies they developed, their perceptions of institutional responses, the psychosocial impacts of sustained conflict on their educational engagement, and their perspectives on the future of Ukrainian higher education. Interviews lasted between 45 and 90 minutes and were conducted primarily via video conferencing due to security and mobility constraints, with participants' informed consent obtained in all cases. The research team included both external researchers and Ukrainian researchers with direct insider knowledge of the wartime context, enabling multi-perspective analysis that integrated external observations with internal contextual understanding.

Document analysis examined national policy documents including the Law of Ukraine "On Higher Education" and its amendments under martial law, the Strategy of Higher Education Development in Ukraine for 2022-2032, orders from the Ministry of Education and Science establishing the Situation Centre and regulating educational processes under martial law, and institutional development plans and contingency protocols. Of particular importance were documents related to the digital transformation of education, including the massive introduction of distance learning through Zoom, Google Classroom, Moodle and other digital platforms, and the establishment of education management information systems to track the movement of students and teachers (Londar et al., 2024). These documents provided essential context for understanding the formal frameworks within which individual and institutional adaptations occurred.

Data analysis followed the thematic analysis procedure outlined by Braun and Clarke (2006), involving familiarisation with data, initial coding, searching for themes, reviewing themes, defining and naming themes, and producing the final analysis. Two researchers independently coded a subset of the interview transcripts and memoir data to establish inter-coder reliability, with discrepancies resolved through discussion and refinement of the coding framework. The analysis was guided by the research questions but remained open to emergent themes, including the unexpected prominence of "patriotic motivation" as a driver of educational persistence and the concept of "shared resilience" that emerged from the interaction between institutional frameworks and individual agency.

The integration of findings across the multiple data sources followed a convergent approach, wherein memoir analysis, interview data, and document analysis were analysed separately and then synthesised during the interpretation phase. This integration revealed both convergent patterns such as the consistent emphasis on digital transformation as the primary enabler of educational continuity and divergent practices, such as variation in the extent to which institutions provided psychosocial support versus delegating coping responsibilities to individuals.

Ethical considerations were paramount throughout the research process given the vulnerable circumstances of participants living under martial law. Approval was obtained from the institutional ethics committee, and all participants provided written informed consent with explicit acknowledgment of their right to withdraw at any time. Confidentiality was maintained through the use of pseudonyms, and care was taken to avoid questions that might cause psychological distress or compromise participant security. The research was conducted in accordance with the guidelines

for ethical research in conflict-affected settings, prioritising participant wellbeing over data completeness.

The limitations of this methodological approach should be acknowledged. The purposive sampling of institutions, while enabling depth of analysis, limits the generalisability of findings to the entire Ukrainian higher education system, which comprises over 300 institutions with vastly different circumstances. The reliance on self-reported data in memoirs and interviews introduces the possibility of social desirability bias and the tendency to construct coherent narratives that may not fully capture the chaos of lived experience. The cross-sectional design precludes causal claims about the relationship between specific adaptation strategies and educational outcomes, and the rapidly evolving nature of the conflict means that findings may have limited temporal validity. However, the triangulation of multiple data sources, the inclusion of critical and sceptical perspectives, and the integration of insider and outsider analytical viewpoints mitigate these limitations to a significant extent.

## FINDINGS AND DISCUSSION

The findings of this study reveal a multi-layered picture of educational resilience in Ukrainian higher education during armed conflict, characterised by the intensification of pre-existing academic challenges through war-related disruptions, the mobilisation of everyday adaptive practices for extraordinary circumstances, the emergence of "shared resilience" as a mechanism enabling educational continuity, and persistent gaps between formal institutional adaptations and the practical needs of students and faculty. Across the four institutional cases examined, several convergent themes emerged regarding the nature of wartime educational challenges, the strategies employed by individuals and institutions to maintain functionality, and the theoretical insights that this extraordinary context generates for understanding resilience in higher education.

The analysis of student memoirs from Lviv University during the winter examination session of 2022-2023 documented what the study terms "compounded adversity" a pattern where everyday academic stressors common to higher education worldwide were intensified and intertwined with war-specific disruptions, creating layered challenges that demanded responses across multiple levels simultaneously. Students continued to contend with typical academic concerns including performance anxiety related to career aspirations and scholarship maintenance, motivational fluctuations characteristic of university life, financial constraints requiring many to balance employment with studies, and resource limitations in library access and study materials. However, these familiar stressors were amplified



by air raid alerts that frequently interrupted academic activities and affected psycho-emotional states, power outages that complicated study routines and disrupted digital learning platforms, and the constant psychological burden of living under military threat. One student captured this compounding poignantly: "It was hard to fully engage in studying or devote yourself completely to exam prep, because there's just not enough space for it in your head. There are constant thoughts and reflections about the war that can't simply disappear." Another described the practical disruption of examinations continuing under extraordinary circumstances: "We had to take exams in a shelter when the alarm went off. It was hard to focus, but we had no choice." This pattern of compounded adversity aligns with Southwick et al.'s (2014) discussion of how different types of stressors accumulate and interact, requiring interdisciplinary approaches and multi-level interventions, and extends Theron's (2021) understanding of resilience as emerging through interactions between students and their educational environment to the extreme context of armed conflict.

The adaptive strategies employed by Ukrainian students demonstrate what Masten (2001) termed "ordinary magic" the mobilisation of everyday adaptive systems to meet extraordinary challenges extended from individual psychology to social and practical dimensions. Rather than developing entirely novel coping mechanisms, students repurposed existing academic practices for wartime conditions, intensifying and modifying strategies they already employed in peacetime. Time management, already essential for balancing coursework, was adapted to incorporate air raid schedules and power outage predictions, with students developing detailed hourly planning to manage preparation before electricity was lost. Social study networks, traditionally formed for academic collaboration, evolved to include resource-sharing, identification of locations with electricity and internet access, and mutual emotional support. Students created temporary psychological safety zones by deliberately disconnecting from conflict-related information, using academic accomplishments as sources of positive emotion during uncertainty, and reframing their educational persistence as patriotic resistance. One student articulated this motivational transformation: "We are future specialists who are the basis of patriotism, nationalism, who will rebuild our state with our own strength, mind, and power!" Another described seeing education as direct contribution to Ukraine's future: "Ukrainians once again prove their strength and indomitability, continue to work, teach, study, fight evil and live despite the war." This transformation of ordinary adaptive responses supports Bakhmat et al.'s

(2022) observation that previous crisis experiences, particularly the COVID-19 pandemic, provided foundational adaptive skills that students could modify and extend for wartime conditions, highlighting how each layer of adversity builds upon existing adaptive mechanisms.

Institutional adaptations at Lviv University and across the Ukrainian higher education system reflected what Pinheiro and Young (2017) describe as a partial transformation from a "strategic" university model characterised by standardisation, rigid procedures, and centralised control toward a more "resilient" model capable of flexibility and adaptation. The most fundamental adjustment involved the transition to hybrid learning formats, enabling participation regardless of location and accommodating students who had been displaced, were serving in the military, or were studying from abroad. The university maintained routine academic schedules even during power outages, with one student noting that "the university worked even without electricity, so all seminars were on schedule, thereby making preparation easier." Assessment procedures underwent significant adaptations, with faculty demonstrating increased flexibility through modified grading criteria, extended deadlines, and alternative evaluation methods. One student reported that "some lecturers were understanding and multiplied the current assessment by 2, which in total gave the exam grade," while another noted that "some assignments could be submitted over a longer period of time, and tests could be taken not at a specific hour, but at any time of the day when you had electricity." These institutional responses demonstrated three characteristics of resilient organisations identified by Pinheiro and Young: the creation of "slack" in systems through loosened academic timelines and flexible examination formats; "decoupling" as departments and individual faculty gained greater autonomy to adapt courses to local conditions; and elements of "requisite variety" through diversified teaching and assessment approaches that created multiple pathways for student engagement.

However, this institutional transformation remained incomplete, focusing primarily on formal and procedural changes while failing to provide comprehensive support for implementation. While the university modified regulations and organisational structures, it left students and faculty largely on their own to navigate the practical challenges of wartime education. Despite Lviv University maintaining formal psychological support services throughout the war period, student accounts made no mention of accessing such resources, suggesting a significant gap between formal provisions and actual utilisation. Similarly, while examination policies were made more flexible, students had to independently solve infrastructure challenges

such as finding locations with electricity and internet access, planning their days around power outage schedules, and managing the psychological stress of studying under air raid conditions. This pattern indicates a transformation limited primarily to regulatory frameworks rather than extending to resource provision and practical support mechanisms, with the burden of adaptation shifting substantially to individual students and faculty members. Such incomplete transition highlights a critical challenge in educational resilience during crisis: the difficulty of moving beyond formal regulatory adaptations to develop support systems that address the practical needs of the academic community under extreme conditions.

The incomplete transformation of universities from strategic to resilient models revealed a mechanism that enabled educational continuity during wartime that this study terms "shared resilience." This phenomenon emerged as institutional adaptations created spaces of possibility through regulatory flexibility, which students and faculty then filled with their own initiatives and practices. Rather than a fully top-down or bottom-up process, educational resilience manifested through this dynamic interaction between formal institutional frameworks and individual agency. This shared resilience operated through three distinct but interconnected mechanisms identified in the data. First, "institutional space creation" involved the university establishing formal frameworks that permitted alternative approaches to education, including hybrid learning formats, flexible examination schedules, and modified assessment criteria that relaxed traditional procedures. These frameworks alone were insufficient for resilience; they merely created the conditions for it to emerge. Second, "space filling" encompassed practices by both students and faculty who populated formal frameworks with concrete solutions, including micro-regulations through informal arrangements between faculty and students regarding examination accommodations, peer networks for sharing resources and study materials, and grassroots initiatives to identify locations with electricity and internet access. Faculty members adjusted course expectations and created alternative assessment options, operating within institutional frameworks while extending them when formal support proved insufficient. Third, the "responsibility dialectic" emerged as tension between institutional framework-setting and the transfer of implementation burden to students, visible in students' accounts of navigating technological challenges during online examinations or seeking alternative locations with electricity needs formally acknowledged by the university but practically addressed by students themselves. While this transfer of responsibility enabled

adaptation, it also created strain for students already dealing with wartime stress, illustrating the costs of incomplete institutional transformation.

When examined through Keck and Sakdapolrak's (2013) typology of adaptive capacities, the data reveals a multi-layered nature of educational resilience. "Coping capacities" manifested in immediate responses to disruptions, such as relocating to bomb shelters during air raids or using alternative light sources during power outages, representing temporary solutions to acute challenges. "Adaptive capacities" appeared as more systematic adjustments based on accumulated experience, with students developing modified time management systems that anticipated power cut schedules, creating formalised resource-sharing networks, and establishing alternative communication channels, reflecting learning processes where initial coping strategies evolved into more structured responses as patterns of disruption became familiar. "Transformative capacities" emerged through deeper recalibrations of educational meaning and purpose, with students reconceptualising their academic pursuits from primarily career preparation to contributions to national reconstruction, providing motivation amid uncertainty and representing a profound level of adaptation that changes not just practices but underlying values and purposes. This multi-level adaptation demonstrates how wartime educational resilience encompasses a spectrum from practical accommodations to reconceptualisations of education's role during national crisis, extending Theron's (2021) work on educational resilience by illustrating how adaptation occurs simultaneously across different timeframes and depths of change.

The digital transformation of Ukrainian higher education emerged as both a critical enabler of resilience and a source of new vulnerabilities. The massive introduction of distance learning through Zoom, Google Classroom, Moodle and other digital platforms, combined with education management information systems to track the movement of students and teachers, created the infrastructural foundation for educational continuity (Londar et al., 2024). The Ukrainian Component programme for children who had moved abroad allowed displaced students to maintain connection with the national education system, while mobile applications for self-study helped reduce knowledge gaps due to the intermittent educational process. However, digital dependence also created fragility, as Russian attacks on energy infrastructure directly undermined the digital learning ecosystem that universities had come to rely upon. Students reported frequent disruptions: "There was an exam that lasted 35 minutes. For 20 minutes, I kept getting kicked out of Moodle... It's a terrible feeling when you realize there are 5 minutes left, you're on

question 13 out of thirty-five." The digital divide between students with reliable access to devices, electricity, and internet connectivity and those without such access exacerbated existing inequalities, with students in conflict-affected regions and from economically disadvantaged backgrounds facing particular barriers to participation.

The psychosocial impacts of sustained conflict on educational participants emerged as a critical finding with significant implications for policy and practice. Students reported constant mental preoccupation with war that interfered with academic focus, ongoing anxiety and isolation, and existential questions about life choices and future prospects in the context of national crisis. One student described the emotional toll: "Emotionally, it was very difficult. The feeling of anxiety never left. I was constantly haunted by apathy and had no desire to do anything. It was scary to be alone, like you were fighting all the problems by yourself." The war raised fundamental questions about the value of education during national crisis, with some students considering abandoning their studies entirely: "To be honest, the desire to continue studying has dropped a lot. I want to drop out and take my documents." These psychosocial impacts were not merely individual burdens but systemic challenges that affected the entire educational ecosystem, as faculty members similarly struggled with their own psychological stress while attempting to support students. The study by Matkivskyi et al. (2024) confirmed that the ongoing war has had a profound impact on the education system, with significant psychosocial consequences for both learners and educators that necessitate systematic support measures including professional counselling and resilience training.

The international comparative context reveals that Ukraine's experience both parallels and diverges from other conflict-affected educational systems. Similar to Syria and Yemen, Ukrainian higher education has faced multi-level disruptions encompassing physical infrastructure damage, psychological trauma, resource limitations, and displacement. However, Ukraine's distinctive characteristics including its advanced pre-war digital infrastructure, its strong international academic integration, and the fact that the conflict occurred in a European context with substantial international support have shaped a unique trajectory of resilience. The international assistance received by Ukraine, including technical resources, educational materials, and platforms, has been instrumental in stabilising the educational process, though Matkivskyi et al. (2024) note that more coordinated and equitable access to such support is needed, particularly in remote and conflict-affected regions. The emergence of parallel and autonomous educational structures,

including Ukrainian educational hubs in European countries and online communities of displaced students and teachers, has helped preserve access to education while fostering new models of educational initiatives tailored to societal needs during crises.

The policy and legislative framework governing Ukrainian higher education under martial law has evolved rapidly to support educational resilience. The government adopted numerous legislative acts regulating the functioning of educational institutions, including the introduction of flexible forms of education such as distance, blended, and asynchronous learning; amendments to state education standards to allow curriculum adaptation to crisis needs; easing of bureaucratic procedures including teacher certification and licensing; maintenance of funding for educational institutions even when students temporarily left the country; creation of regulatory frameworks to support teachers forced to relocate and work remotely; and mechanisms for international recognition of Ukrainian educational documents to facilitate refugee education abroad (Londar et al., 2024). The establishment of the Situation Centre of the Ministry of Education and Science on 24 February 2022 ensured operational monitoring of the state of education and coordination of actions to support educational institutions, contributing to rapid response to threats and the resumption of education. These policy developments demonstrate how legislative flexibility can create the conditions for institutional and individual adaptation, though the study findings suggest that formal policy alone is insufficient without corresponding investments in practical support systems.

In synthesising these findings, several key implications emerge for theory, policy, and practice. Theoretically, the Ukrainian case supports a conceptualisation of educational resilience as an interactive, multi-level phenomenon where individual, institutional, and systemic adaptations mutually constitute one another, with resilience emerging at the intersection of structural flexibility and individual agency rather than from either alone. The concept of "shared resilience" offers a promising framework for analysing how complex organisations maintain functionality throughout prolonged crises, extending beyond armed conflict to natural disasters, pandemics, and other systemic shocks. For policy, the findings suggest that institutions should create frameworks that support rather than merely permit adaptation, balance flexibility with standards, and systematically learn from each crisis to build adaptive capacity for future disruptions. The need for systematic psychosocial support programmes, investment in digital infrastructure with attention to equitable access, and comprehensive teacher training in crisis-responsive

pedagogies represents urgent priorities. For practice, the emphasis on authentic alignment between formal policies and practical support, the recognition of student agency as a critical resource for resilience, and the importance of maintaining educational routines and standards amid disruption offer guidance for educators and administrators navigating crisis contexts. The persistent challenges of incomplete institutional transformation, inequitable resource distribution, and the psychosocial toll of sustained conflict highlight that educational resilience during armed conflict is not a state to be achieved but an ongoing process of adaptation, learning, and mutual support.

## CONCLUSION

This study has examined the mechanisms, challenges, and outcomes of educational resilience in Ukrainian higher education during the armed conflict precipitated by Russia's full-scale invasion in February 2022, revealing a complex picture of remarkable institutional adaptability alongside significant persistent challenges. The findings demonstrate that Ukrainian universities have maintained educational continuity through a combination of rapid digital transformation, regulatory flexibility under martial law, forced institutional relocation, and the emergence of "shared resilience" a dynamic interaction between formal institutional frameworks and grassroots student and faculty initiatives. The concept of "compounded adversity," where everyday academic stressors are intensified by war-related disruptions, captures the lived experience of students navigating examinations, motivation, and career planning under conditions of air raids, power outages, and psychological trauma. The mobilisation of "ordinary magic" the extension of everyday academic practices for extraordinary circumstances illustrates how resilience builds cumulatively across crisis experiences, with the digital competencies developed during the COVID-19 pandemic providing foundations for wartime adaptation. However, the study also reveals critical gaps between formal institutional adaptations and the practical needs of educational participants, with incomplete institutional transformation transferring significant adaptation burdens to individual students and faculty. The psychosocial impacts of sustained conflict, the digital divide exacerbating educational inequalities, and the tension between maintaining academic standards and ensuring equitable access represent ongoing challenges that demand continued policy attention and international support. For the broader scholarly community, Ukraine's experience extends theoretical understanding of educational resilience by demonstrating how resilience emerges from dynamic interactions across system levels rather than from any single

component, and by illuminating the costs as well as the benefits of adaptive flexibility. As Ukraine continues to navigate the prolonged challenges of armed conflict while preparing for post-war reconstruction, the principles of shared responsibility, systematic support, and the integration of psychosocial wellbeing with educational continuity that emerge from this study offer guidance not only for Ukraine but for any educational system confronting sustained disruption.

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