

People learn fastest on the barricades: Science at war

Valentyna Peregudova 

Head of the Department of Professional Education, Labor Training and Technology, Berdyansk State Pedagogical University, Zaporizhzhia, Ukraine

Management in Education

1–4

© 2023 British Educational Leadership, Management & Administration Society (BELMAS)

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/08920206231188018

journals.sagepub.com/home/mie



Introduction

For more than a year now, a full-scale war has been ongoing in Ukraine. Every day, the country is under rocket attacks. Combat actions are taking place on a significant territory, and many regions are under occupation. The situation in which Ukrainian scientists find themselves has a global dimension: as long as there are authoritarian regimes in the world, any country could find itself in a similar position. Therefore, it is necessary to study the experiences of countries that have had military actions on their territories globally and jointly develop counteraction algorithms and mechanisms to solve specific problems. This article discusses the challenges and issues that have arisen for Ukrainian scientists, as well as the search for ways to support and develop the country's scientific potential in the conditions of conflict and the aftermath of war.

Context

I am the Head of the Department of Vocational Education, Labor Training, and Technologies at the Berdyansk State Pedagogical University (BSPU), Berdyansk, Ukraine.

On the third day of the war, Russian military equipment entered the city of Berdyansk, and almost the entire staff of the institution, like the inhabitants of the city, found themselves under temporary occupation.

The initial emotions were confusion, helplessness, an inability to accept the situation, and complete inaction. Over time, we gradually began to restore educational, methodological, organizational, and scientific activities. Today, the city of Berdyansk is still under occupation; the university has been temporarily relocated and exists in the format of a “University without walls.”

Part of the team (47%) is currently in the occupation zone; 54% left their homes and moved away; among them: 40% are internally displaced persons (residing in Ukraine), and 14% left the country.

From my experience as a department head, out of all the activities of department members, scientific work suffered the most at this stage.

Scientific problems and challenges in the context of war

The prevailing war conditions pose a plethora of scientific challenges, severely affecting researchers' lives and professional endeavors.

One of the most pressing issues is personal safety. Scientists, whether residing in occupied zones or those displaced, face substantial threats to their security and have their mobility drastically curtailed. Such circumstances significantly impede their professional activities and render conducting scientific research nearly impossible (Dobiesz et al., 2022; McNutt and Hildebrand, 2022; Moroz, 2022).

Coupled with these immediate dangers, high-stress levels, anxiety, psychotrauma, and depression are rampant among the scientific community (Kurapov et al., 2023; Lavrysh et al., 2022). Such distressing mental states hinder the focus on research and substantially diminish work productivity (Pavlova et al., 2022; Sheather, 2022; Suchikova et al., 2023c). The sense of loneliness and alienation, particularly in the occupation zone from which departure is often strenuous or simply unfeasible, adds another layer of hardship (Dobiesz et al., 2022; Suchikova et al., 2023d).

In addition to these human challenges, access to critical resources is another major concern. Within the occupation zone and regions near military operations, scientists often find access to critical infrastructure such as laboratories, libraries, and archives severely obstructed or even impossible. Many times, they also lack internet connectivity, a lifeline in today's world (Lutsenko et al., 2023; Petrić et al., 2022; Suchikova and Tsybuliak, 2023b).

The war has wreaked havoc on Ukraine's economy over the past year, having a catastrophic effect on the national budget. This, in turn, has slashed funding for scientific research, causing significant setbacks in scientific progress and the overall development of the country (Maryl et al., 2022).

In my role as the head of the department, the challenges are multifaceted. In addition to dealing with personal issues such as psychological, emotional, and physical stressors, I have to manage and motivate my team. This involves ensuring their continued professional activities on all fronts, maintaining communication with students, particularly those who live in dormitories without parents, and facing financial constraints. These demands require focused

Corresponding author:

Valentyna Peregudova, Head of the Department of Professional Education, Labor Training and Technology, Berdyansk State Pedagogical University, Zaporizhzhia, Ukraine.

Email: peregonta@gmail.com

efforts, well-calculated strategies, and a high degree of resilience.

What can we do?

To enhance the professional growth of my colleagues, particularly in the scientific realm, several strategies can be employed.

Here are some options.

One could consider a temporary suspension of projects if required, altering the scientific research trajectory or persisting with existing projects to keep up the work pace and maintain scientific expertise.

To bolster their work, it is crucial for scientists to forge robust international connections. By collaborating with global counterparts and participating in international scientific conferences or exchange programs, they can gain valuable insights. Many foreign colleagues demonstrate a welcoming attitude toward collaboration, displaying traits such as openness, empathy, respect, and goodwill, which contribute to fostering a conducive environment for cooperation.

Exploring new funding avenues, including grants, is another essential step. This financial aid can ensure the continuity and advancement of scientific research. Moreover, it would enable our scientists to keep working on their projects which are critical to resolving key issues in Ukraine.

Cultivating a culture of collaboration and support among colleagues across various scientific centers and universities within Ukraine is another essential aspect. This network will facilitate knowledge exchange, a united front to tackle pressing scientific challenges, and the sharing of invaluable experience.

As we adapt to the new normal, refining remote working skills has become crucial. A considerable proportion of BSPU educators are actively enhancing their digital proficiency to effectively use online tools for their work. Around 52% of the department's teachers have completed the "Google Digital Tools for Education" course. Learning new distance education methodologies can augment the education quality under crisis conditions and provide broader opportunities to all involved.

In these demanding times, psychological support assumes even greater significance. At BSPU, we have a psychological counseling lab where teachers and students can seek assistance to manage their emotional health. State-level social services frequently incorporate psychological help through seminars, practice, webinars, and online courses. Many foreign professionals are assisting in this domain as well. For instance, Ukrainian scientists can now enroll in the "Basic Psychological Aid in War Conditions" course, part of the "EU Urgent Support for Civil Society" project. Despite these efforts, more targeted measures are needed, as the demand for such services outpaces the available resources.

The World Health Organization, together with the Ministry of Health and the First Lady of Ukraine, Olena Zelenska, is making certain efforts to rebuild the mental health system for those affected by the war, but given the scale of the problem, a total approach is needed: assistance from

international organizations, use of the network of health institutions, pilot projects, mass media, social networks, and so on.

Teacher leadership

The role of close contact between students and teachers is extremely important. This applies to all types of activities, educational, scientific, organizational, and civic. The teacher is always a leader, so when interacting with a student, they feel responsibility and demonstrate the stability of their civic positions and their strength according to the profession. However, the importance of such leadership during the war, under conditions that each of us had to face for the first time, increases significantly. This is where the authenticity of not only a professional, a teacher to whom an example is taken, but also a citizen of their own country is revealed.

Self-leadership is paramount; each of us understands our own strengths and weaknesses, which can transform in crisis conditions (Kozmenko et al., 2023; Suchikova, 2023a). It is here that self-control is necessary, control from the manager, colleagues, and, if necessary, timely assistance and support, exchange of experiences, thoughts, and decisions. Today, as a rule, remote meetings with colleagues take place synchronously and asynchronously (Kuzheliev et al., 2023; Lopatina et al., 2023). From my own experience, I can testify to the importance of individual contact with colleagues, especially concerns those who remain in the occupation because the most difficult problems with security and communication are there. Each person feels a strong psychological pressure, a constant feeling of fear for their own life, close ones, and students—this is a challenge for the teacher as an individual and a professional, a leader. Not everyone overcomes this—15% of the members of my department have gone on a temporary suspension of activity in BDU.

A possible way to support teacher leadership in war conditions is the development of mentoring: a system in which experienced teachers or scientists can contribute to the development of leadership qualities of colleagues who find themselves in crisis conditions. An internationally recognized mentor can provide advice, share experiences, and promote professional growth, providing professional support.

Student science during the war

The absence of All-Ukrainian student Olympiads and scientific work competitions since the beginning of the full-scale Russian aggression significantly reduced the scientific potential of students and required the development of student flexibility in research activities.

However, scientific conferences (international and all-Ukrainian) are being restored and are gaining momentum (Ostapenko, 2022; Zayachkivska et al., 2022). At the moment, active preparation for science days is underway in BSPU, and students, despite problems, show interest and continue scientific research. Almost 45% of students have prepared publications for the collection of student scientific papers at BDU and are preparing presentations for the scientific conference.

My own impressions and surveys of colleagues regarding student scientific work during the war indicate an increase in the positive dynamics of student activity in science. They position their activity as their own contribution to the struggle for everyone's freedom in helping their country in hard crucial times.

Anastasia Psol, a first-year graduate student, describes her motivation to engage in science as follows:

Scientific activity is useful for any age because it has no frames and boundaries. The realities of full-scale war pointed me to the directions in which I need to investigate and develop. So science, for me, is also reproduction and cognition. I learned self-control and self-soothing in stressful and crisis situations, searching and using information in seemingly unreal conditions. Scientific activity is now characterized by an intense search for new approaches to studying, analyzing, and synthesizing material. Various electronic resources and platforms have become more accessible to study and justifying information.

In my opinion, science is the basis for the development of not only each person but also of the state as a whole. The fact that our country has not stopped but has even accelerated its scientific development is an incredible pride for me. Now Ukraine is showing the world an example of state development and crisis management, including in the scientific sphere.

Such students inspire not only their peers but also their teachers and me personally! Talking to them, you realize: that our people cannot be overcome, cannot be subdued!

In the outlined conditions, the experience of international student science hubs would be useful: organizations or centers that would provide students from the war zones with the opportunity to unite, cooperate, and develop their scientific skills in an international environment; create platforms for meetings, experience exchange, cooperation, and development of scientific projects between students from different countries; access to various resources, such as laboratories, libraries, information technology, and other equipment, i.e., the creation of a productive scientific environment.

Conclusions

Referring to the famous phrase “people learn faster than anything on the barricades” (Zelenin, 2022), we can confidently say that it has been proven once again, but the situation requires a systematic approach.

Crisis situations, especially those related to military actions, require special training and preparation, not only from scientists but also from all members of the educational and scientific community. Educational institutions should consider the possibility of integrating such courses into their programs to ensure flexibility and resilience under learning processes in conditions of instability.

It is important to emphasize that solidarity and cooperation between different scientific communities should be strengthened in a crisis. However, this may require a new

approach to scientific activity and international relations that takes into account political and ethical considerations, especially in the context of relations with aggressor countries and those who support them.

This brings us to the need for a deep discussion and reflection on how best to shape these relationships. Should we, as scientists, allow political circumstances to influence our work? How can we maintain scientific neutrality in the face of global political conflicts? And how can we ensure that our research and teaching continue regardless of military actions or political tensions?

These questions require further consideration and discussion, and they are of great importance not only for the scientific community but also for the whole society. They affect political, social, and educational structures, demanding an integrated and humanistic approach to the problems that arise as a result of military conflict. Developing strategies to address these issues is not only a scientific duty but also a civic responsibility.

Responding to these challenges may require a new approach to scientific ethics and principles of academic freedom, as well as a review of policies in the field of education and science to meet the needs of society in times of war and crisis. This may also require the development of new protection mechanisms for scientists and students in conflict areas.

In turn, the global scientific community has a chance to make more efforts to improve approaches to maintaining solidarity and to have a clear action plan in crisis (war) conditions since the scientific activity is international in nature. In addition, it is necessary to carefully work out aspects of scientific relations with representatives of aggressor countries as well as those countries that support them.

Finally, as we continue to understand and research these challenges, the presence of an open and honest dialogue among all stakeholders—from scientists and students to politicians and the public—is key to providing an effective response to these complex issues.

Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Valentyna Peregudova  <https://orcid.org/0000-0002-7965-9494>

References

- Dobiesz VA, Schwid M, Dias RD, et al. (2022) Maintaining health professional education during war: a scoping review. *Medical Education* 56(8): 793–804.
- Kozmenko S, Danko Y and Kozlovskiy S (2023) Academic management in war conditions: chronicles of aggression and resistance experience of Ukrainian universities. *Problems and Perspectives in Management* 21(2-si): 1–3.

- Kurapov A, Pavlenko V, Drozdov A, et al. (2023) Toward an understanding of the Russian-Ukrainian war impact on university students and personnel. *Journal of Loss and Trauma* 28(2): 167–174.
- Kuzheliev M, Zherlitsyn D, Nechyporenko A, et al. (2023) Distance learning as a tool for enhancing university academic management processes during the war. *Problems and Perspectives in Management*, 21(2-si), 23–30.
- Lavrysh Y, Lytovchenko I, Lukianenko V, et al. (2022) Teaching during the wartime: experience from Ukraine. *Educational Philosophy and Theory*. <https://doi.org/10.1080/00131857.2022.2098714>.
- Lopatina H, Tsybuliak N, Popova A, et al. (2023) University without walls: experience of Berdyansk state pedagogical university during the war. *Problems and Perspectives in Management*, 21(2-si), 4–14.
- Lutsenko A, Harashchenko N, Hladchenko L, et al. (2023) The results of the survey on the needs of Ukrainian scientists (First wave report) (Research Paper No. 23-03). Max Planck Institute for Innovation & Competition. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4335098.
- Maryl M, Ivashchenko OV, Reinfelds M, et al. (2022) Addressing the needs of Ukrainian scholars at risk. *Nature Human Behavior* 6: 746–747.
- McNutt M and Hildebrand J (2022) Scientists in the line of fire. *Science* 375(6585). <https://doi.org/10.1126/science.abp8817>.
- Moroz Y (2022) Here in Ukraine, science continues under air raids. *Nature* 605(7911): 590–590.
- Ostapenko L (2022) Scholarly publishing in Ukraine since February 24, 2022. *Septentrio Conference Series* (1). <https://doi.org/10.7557/5.6771>.
- Pavlova I, Graf-Vlachy L, Petrytsa P, et al. (2022) Early evidence on the mental health of Ukrainian civilian and professional combatants during the Russian invasion. *European Psychiatry* 65(1): 79.
- Petrić HN, Gaiñd N and Van Noorden R (2022) Nature's take: how the war in Ukraine is impacting science. *Nature*. <https://doi.org/10.1038/d41586-022-03155-z>.
- Sheather J (2022) As Russian troops cross into Ukraine, we need to remind ourselves of the impact of war on health. *BMJ* 376: o499.
- Suchikova Y (2023a) A year of war. *Science* 379(6634). <https://doi.org/10.1126/science.caredit.adh2925>.
- Suchikova Y and Tsybuliak N (2023b) Universities without walls: global trend v. Ukraine's reality. *Nature* 614. <https://doi.org/10.1038/d41586-023-00380-y>.
- Suchikova Y, Tsybuliak N, Lopatina H, et al. (2023c). Science in times of crisis. How does the war affect the performance of Ukrainian scientists? *Problems and Perspectives in Management*, 21(1), 408–424.
- Suchikova Y, Tsybuliak N, Lopatina H, et al. (2023d) Is science possible under occupation? Reflection and coping strategy. [special issue]. *Corporate Governance and Organizational Behavior Review* 7(2): 314–324.
- Zayachkivska O, Smiechowska T and Souchelnytskyi S (2022) The war and science in Ukraine: we can contribute to victory. *Proceedings of the Shevchenko Scientific Society. Medical Sciences* 66(1). <https://doi.org/10.25040/ntsh2022.01.02>.
- Zelenin V (2022) Victorious leadership: wartime transformations <https://mim.kyiv.ua/news/article/peremojne-lderstvo-transformac-pd-chas-vyni-mim-toolbox>.

Author Biography

Valentina Peregudova, PhD, associate professor, head of the Department of Professional Education, Labor Training and Technology of Berdyansk State Pedagogical University. Research interests: higher school pedagogy, technology teacher training, academic potential, and quality of education.

