Building Resilience of Ukrainian Higher Education: Remote Academic Work in Times of War

Nataliya Berbyuk Lindström, University of Gothenburg,
nataliya.berbyuk.lindstrom@ait.gu.se
Aleksandre Asatiani, University of Gothenburg, aleksandre.asatiani@ait.gu.se
Liudmila Grynevych, Simon Kuznets Kharkiv National University of Economics,
ludmyla.grynevych@gmail.com
Natalia Kononova, University of Gothenburg, nataliia.kononova@ait.gu.se

Introduction to the study

Disasters and crises have devastating impacts on entire societies around the world. Natural disasters such as earthquakes, floods, and hurricanes, or man-made disasters such as terrorism, war, and cyber-attacks put people in danger of injury or death, losing homes and family members (Freebairn et al., 2020). The COVID-19 pandemic, ongoing climate disasters, and military conflicts have impacted our lives significantly. One sector that is being especially affected is higher education. The restrictions, triggered by the pandemic, have introduced the 'new normal', dominated by remote work and online education, to the higher education (HE) sector. For the Ukrainian higher education institutions (HEIs), the COVID-19 crisis was followed by the Russian invasion in early 2022, further disrupting their operations, and forcing them to cope with the emergent challenges.

Disasters and crises upset the normal operations of society and reveal the inherent fragility of infrastructure and social order that we take for granted (Buergelt & Paton, 2014; Magutshwa et al., 2022). To ensure institutional continuity, organizations need to build resilience to the impact of such events. Resilience describes positive patterns of adjustment in the environment of crisis, in the effort to recover from the disturbance (Hollnagel, 2015; Masten & Obradovic, 2006). Advancements in digitalization and remote work practices provide organizations with resources to make such adjustments in face of crises that threaten the physical infrastructure of an organization, or people's ability to work face-to-face. Remote work in particular provides workers with spatial, temporal, and technological affordances that allow for productive work on distance (Nansen et al., 2010; Richardson & Mckenna, 2014). The experiences during the COVID-19 pandemic showed that organizations were able to effectively rely on such affordances to cope with the crisis (Leary et al., 2020; Parry et al., 2021). In this study, we investigate how Ukrainian HEIs utilized digitalization and remote work practices during the pandemic, and how pandemic experiences helped these institutions to stay resilient amid the war. We thus pose the following research question: *How do digitalization and remote work practices contribute to building resilience in organizations in multiple crises?*

To tackle this question we plan to rely on two major streams of theory: organizational resilience (Hollnagel, 2015; Masten & Obradovic, 2006), and organizational discontinuity theory in remote work (Watson-Manheim et al., 2012). As the war in Ukraine continues, and this study is a longitudinal one, we also consider collecting and analyzing the data in relation to different phases of war, inspired by Carugati et al., 2020.

Method

Empirical setting

Our empirical setting is HEIs in Ukraine, which have experienced a sequence of severe external crises starting with the hostilities in the Donetsk and Donbas areas in 2014, the COVID-19 pandemic in early 2020, and later continuing with the Russian act of aggression in February 2022. These crises have significantly disrupted the educational and work processes of HEIs and forced them to actively develop and deploy digital collaboration and education technologies, in an effort to cope with emergent challenges.

The COVID-19 pandemic necessitated restrictions to the mobility of the citizens and move to remote education (Ministry of Health of Ukraine, 2022), limiting opportunities for face-to-face interactions and triggering digitalization initiatives across the Ukrainian HEIs, which included the development and deployment of various online education, communication and collaboration platforms. The war has exacerbated challenges presented by the COVID-19 pandemic. This led to the occupation of territory, destruction of HEIs' infrastructure, and mass evacuation of people, particularly in the Eastern part of the country. Despite these challenges, the Ukrainian government decided to restore the work of HEIs after a brief seizure of operations in later February - early March of 2022.

Data collection and analysis

This study is being conducted within a Ukrainian-Swedish research project "Digital resilience of Ukrainian Higher Education Institutions in Times of Crises." The project is a collaboration between Department of Applied IT, University of Gothenburg, Sweden and Department of Marketing, Simon Kuznets Kharkiv National University of Economics, Ukraine. We conducted semi-structured interviews with key stakeholders within a range of HEIs in Ukraine. Specifically, we focused on university management, academic staff, and students. Our interview questions covered three major themes: transition to remote work during the pandemic; the impact of war on the work and education process within HEIs; and the value of the experience from the pandemic in building resilience during the war.

Between June and October 2022, we conducted 34 semi-structured interviews, and we intend to continue data collection. Our informants, which include 15 students, 11 teachers, and eight university managers, such as vice-chancellors and deputy vice-chancellors, are employed/study in 12 HEIs across Ukraine, in both temporarily occupied and non-occupied areas. Two of the authors work in Ukrainian HEIs and are familiar with key stakeholders in the sector. These authors provided an access to the informants and helped our team to establish legitimacy in the eyes of the informants. Before each interview, we explained the purpose of our research to the informants, asked for explicit consent to record the interview and use it in our research, and explained their rights to withdraw the consent. We received ethics approval to collect our data from the ethics committee at Simon Kuznets Kharkiv National University of Economics, Ukraine. All respondents are anonymized in all published materials.

Interviews were conducted online using either *Zoom* or *Microsoft Teams*. All interviews were audio recorded and transcribed verbatim. Interview length varies between 30-60 minutes. Interviews were conducted in Ukrainian, Russian, and English, depending on the

preference of an informant. The research team includes native speakers of Ukrainian and Russian, and fluent speakers of English. Therefore, we were able to conduct all interviews without a translator.

At this stage, we have only conducted a partial preliminary analysis of our data. We used this analysis to develop our interview protocol and clarify the scope of our study. Eventually, we plan to utilize the three-stage coding approach proposed by Gioia et al. (2013), starting with open coding. We plan to complete the first round of open coding with the existing data, and then continue data collection as necessary.

Reflections on preliminary results

Though the vast majority of our respondents considered the crisis unanticipated, some mentioned that they expected the war to start at any time after the "Orange revolution" in 2014. Still, the shelling in the early morning on February 24 was a scary experience, especially for those respondents who lived Eastern Ukraine "*We live very close to Russian borders. Bombings. It was very loud, and I was very scared.*" All respondents commented on calling around their colleagues, family, and friends and checking if they were fine. The managers mentioned contacting other managers and university staff, primarily calling or sending messages, asking them if they safe. Ukraine's Ministry of Education and Science almost immediately reached out to university management announcing a two-week "vacation" to make sure that staff and students can relocate to safe locations. This information was spread primarily via the university websites, but also via *Telegram* and *Viber* to ensure that everyone could get information as soon as possible. The respondents admitted that establishing reliable communication channels among university management, staff and students was the primary purpose during these weeks. As in some parts of the country, the battles were severe, and some people had to evacuate quickly, often not in their own vehicles. They could not take many things with them and had to leave their laptops, hoping to return in a couple of days. In many cases, these people were completely dependent on mobile phones to keep in touch.

The experiences of the initial coping stage (February-March, 2022) were both different and similar among the respondents from the parts of the country which were under attack, temporarily occupied or non-occupied areas. In all universities, the staff made sure that the university's digital infrastructure, e.g., servers, was moved to bomb shelters and cellars. In the case of temporarily occupied areas, the university staff was relocated to the safer parts of the country. The managers also mentioned purchasing Starlink satellites to ensure the internet connection. Some respondents also commented on actively digitalizing university libraries and student services, especially the files of staff and students who joined the army. In Western Ukraine, students and staff were actively engaged in volunteering work, e.g., supporting the relocated staff and students, preparing food and clothes for the army, raising money, etc. The university staff was concerned about not being able to reconnect with their students, which was especially important for the staff from the universities whose university physical infrastructure was destroyed. The respondents mentioned creating *Telegram* groups for joint discussions and keeping regular contact.

In the middle of March, universities around the country initiated resuming academic work. The model, adopted during the pandemic, was used; teaching and staff contacts via *Zoom*, *Google Hangouts/Drive*, and *MS Teams* were resumed. Compared to the pandemic, the participants commented on the increased use of Instant messaging, such as *Viber* and *Telegram*. One of the reasons was the experienced uncertainty of whether the person one wants to contact is safe/alive, which made status updates essential. *Telegram* is especially popular as it encompasses both messaging and channel-sharing functions, enabling informal chatting and sharing course materials. Further, in case of internet disruptions, *Telegram*, available on smartphones, offered opportunities to connect to each other. For instance, in case of a lecture interruption due to bombings, one could check the time for a new lecture in the app.

Another clear difference between the pandemic and war is reflected in the use of electronic ID and Diia (Action; Ukrainian: Дія, lit. 'Action'; also an acronym for Ukrainian: Держава і Я, romanized: *Derzhava i Ya*, lit. 'State and Me'). The mobile app, a web portal, and a brand of e-governance in Ukraine was launched in 2020 by the Ukrainian Ministry of Digital Transformation. It is an all-purpose application, which holds such essential documents as an electronic national passport, driving license, passport for traveling abroad, car registration documents (including car insurance information, etc. The app is expensively used for signing documents, such as diplomas, examination results, etc. Compared to the pandemic, when one could come to university premises for doing paperwork, it became impossible or risky after the start of the hostilities. Thus, using electronic signatures became increasingly common.

From April-June, the respondents experienced their work situation becoming relatively stable. All respondents were working exclusively online, mentioning primarily positive experiences. The respondents considered increasing decentralization as a welcoming effect of the crisis. The teachers reported getting more freedom to choose the tools to use in teaching and less managerial control, which resulted in online classes becoming more creative and interactive. The teachers also mentioned putting efforts into encouraging their students, some of whom experienced psychological distress after losing their friends, family, and homes. The students, in their turn, appreciated their teachers becoming more flexible in terms of the deadlines. The main concerns were challenges in attracting new students to the Ukrainian HEIs and the risks that the education obtained during the war will be perceived as of inferior quality.

Expected contributions and future plans

The findings show the pivotal role of remote work in keeping Ukrainian academia alive in times of multiple crises. There are indications that crises led HEIs to kick-start digital transformations, upskill their employees in the use of digital tools, and become more agile in their work. HEIs in Ukraine offer a unique, revelatory case of how organizations can build resilience amid multiple external crises by relying on digital tools and remote work practices. Though in the research project, the needs of the Ukrainian collaborators are prioritized, the project relates to challenges in other contexts when remote work is increasing. The project will contribute to research on remote work and education in times

of crisis, serving to theory development in the fields of crisis management, remote work, communication, and educational sciences.

References

Buergelt, P. T., & Paton, D. (2014). An Ecological Risk Management and Capacity Building Model. *Human Ecology*, *42*(4), 591–603.

Carugati, A. Lapo, M., Plé, L. Lauwers, M., & Giangreco, A. (2020) Exploitation and Exploration of IT in Times of Pandemic: from Dealing with Emergency to Institutionalising Crisis Practices, European Journal of Information Systems, 29:6, 762-777.

Freebairn, A., Hagon, K., Turmine, V., Pizzini, G., Singh, R., Kelly, T., Jaime, C., Scherer, N., Siahaan, K., Hartelius, J., & others. (2020). *World Disasters Report 2020: Come Heat Or High Water*. International Federation of Red Cross and Red Crescent Societies.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology. *Organizational Research Methods*, *16*(1), 15–31.

Hollnagel, E. (2015). *RAG – Resilience Analysis Grid* (Introduction to the Resilience Analysis Grid, p. 16.

Leary, K. O., Reilly, P. O., Feller, J., Feller, J., O'Leary, K., Gleasure, R., O'Reilly, P., & Feller, J. (2020). Reviewing the Contributing Factors and Benefits of Distributed Collaboration. *Communications of AIS*, 1–55.

Magutshwa, S., Aanestad, M., & Hausvik, G. I. (2022). Beyond crisis response: Leveraging sociotechnical transformability. *Proceedings of the 13th Scandinavian Conference on Information Systems*. Scandinavian Conference on Information Systems, Helsinge, Denmark.

Masten, A. S., & Obradovic, J. (2006). Competence and Resilience in Development. *Annals of the New York Academy of Sciences*, *1094*(1), 13–27.

Ministry of Health of Ukraine. (2022). *Restrictions that have been imposed to localize the spread of COVID-19?* https://covid19.gov.ua/en

Nansen, B., Arnold, M., Gibbs, M., & Davis, H. (2010). Time, space and technology in the working-home: An unsettled nexus. *New Technology, Work and Employment*, *25*(2), 136–153.

Parry, J., Young, Z., Bevan, S., Veliziotis, M., Baruch, Y., Beigi, M., Bajorek, Z., Salter, E., & Tochia, C. (2021). Working from Home under COVID-19 lockdown: Transitions and Tensions. *Work after Lockdown*, *January*, 26.

Richardson, J., & Mckenna, S. (2014). Reordering spatial and social relations: A case study of professional and managerial flexworkers. *British Journal of Management*, *25*(4), 724–736.

Watson-Manheim, M. B., Chudoba, K. M., & Crowston, K. (2012). Perceived Discontinuities and Constructed Continuities in Virtual Work. *Information Systems Journal*, *22*(1), 29–52.