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STUDENTS' SURVIVAL EXPERIENCE IN THE INFORMATION BLOCKADE ON THE EXAMPLE OF THE 2022 SIEGE OF THE UKRAINIAN CITY MARIUPOL

DOŚWIADCZENIE STUDENTÓW W PRZETRWANIU BLOKADY INFORMACYJNEJ NA PRZYKŁADZIE OBLĘŻENIA UKRAIŃSKIEGO MIASTA MARIUPOL W 2022 R.

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Abstract:

The study analyzes the survival experiences of students during the information blockade imposed during the siege of Mariupol, Ukraine, in 2022. Using the case study method, posts, photos, and videos from open sources were examined to fill in gaps regarding students who remained under siege. Additionally, semi-structured anonymous interviews were conducted with students who shared their experiences of survival, including three who provided comments on their time under occupation and their departure from the city. They described the conditions they faced during shelling, the information blockade, and exposure to Russian information aggression and propaganda. Without electricity or mobile communication, students accessed news via medium and long radio waves, conserved phone battery power, and sought mobile internet from higher floors of high-rise buildings to download website headlines or Telegram messages.

Keywords:

Information Aggression, Information Blockade, Student Survival Experience, Signal Jamming, Propaganda, Communication.

Abstrakt:

Badanie analizuje specyfikę przetrwania studentów w blokadzie informacyjnej na przykładzie oblężenia ukraińskiego miasta Mariupol. Wykorzystując metodę studium przypadku, przeanalizowano posty, zdjęcia i filmy z otwartych źródeł, aby uzupełnić luki dotyczące studentów, którzy pozostali w oblężeniu w Mariupolu. Anonimowo przeprowadzono również częściowo ustrukturyzowane wywiady ze studentami. Respondenci podzielili się swoimi doświadczeniami związanymi z przetrwaniem oblężenia Mariupola, a trzech z nich dodało komentarze na temat swojego pobytu pod okupacją i opuszczenia miasta. Analizowali warunki przetrwania podczas ostrzału, blokady informacyjnej oraz rosyjskiej agresji informacyjnej i propagandy. Przy braku elektryczności i łączności komórkowej studenci znajdowali wiadomości na średnich i długich falach radiowych, oszczędzali baterie telefonów i próbowali złapać mobilny internet na wyższych piętrach wieżowców, aby pobrać nagłówki stron internetowych lub wiadomości Telegram.

Słowa kluczowe:

agresja informacyjna, blokada informacyjna, studenckie doświadczenie przetrwania, zakłócanie sygnału, propaganda, komunikacja.

Introduction

Since the onset of Russia's full-scale invasion of Ukraine in 2022, students have been direct witnesses to active military operations. In Mariupol, the educational process was suspended from February 26 to April 2022. Afterward, relocated universities resumed education online in government-controlled Ukrainian territories.

Mariupol was the only Ukrainian city subjected to a full siege for 86 days before being occupied. During the siege, essential services such as electricity, water, gas, heating, internet, and mobile communication were cut off. Under these conditions, the city's population was subjected to Russian influence. The invaders physically destroyed internet infrastructure, mobile phone antennas, and communication stations. At the same time, Russian propagandists jammed Ukrainian radio and television, replaced them with their own channels, spread propaganda via SMS, and verbally disseminated narratives in public places such as water queues. In this context of information aggression, the search for truthful information became crucial.

The aim of this study is to examine how students communicated and accessed information under siege while being exposed to Russian propaganda.

It is important to ask the following research questions:

RQ1. What were the conditions for students in the city of Mariupol, which was under siege?

RQ2. What sources of information did students use to survive and leave the besieged city?

RQ3. What propaganda methods of influence were observed during the siege of the city?

Methodology

This study conducted five semi-structured anonymous interviews with students from Mariupol universities. Finding respondents who had endured the traumatic experiences of the siege and were willing to participate was challenging. The respondents included three female and two male students aged 18 to 22. Prior to the interviews, participants received a Statement of Informed Consent via email. The interviews covered three key topics:

1. The search for and use of information sources at the beginning of the invasion.
2. Sources and methods of communication during the siege.
3. The impact of enemy propaganda and information influence.

One of the study's authors personally experienced the siege, which allowed for a deeper understanding of the interview context.

Interviewees were informed they could withdraw at any time or refuse to answer questions. The interviews lasted an average of 30–40 minutes. The students were enrolled in bachelor's degree programmes at Mariupol universities.

Due to the Statement of Informed Consent and to protect their anonymity, detailed respondent information cannot be disclosed.

Respondents shared their experiences of surviving the siege of the city, including the information blockade. They named the sources of information they used, the methods of influence of Russian propaganda, and the ways of communication. The case study method was used to close the gaps in understanding the conditions of survival of young people under the information blockade, including analysing posts on social media (Telegram, Instagram) and video interviews on YouTube. This approach provided additional insights into students' survival strategies under siege.

Findings

A study by Pavlova and Rogowska (2023) on students from western Ukraine after the 2022 invasion “found that 98% were exposed to war, 86% experienced war-related nightmares, 49% suffered from insomnia, and 27% showed symptoms of PTSD.” The figures for students in eastern Ukraine, including Mariupol, are likely even higher.

Another study by Melnyk examined stress levels among Ukrainian students, revealing that those closer to active combat zones experienced significantly higher stress. He found that students often adopted cognitive restructuring as a coping strategy (9.8 points in Group 3, 9.5 points in Group 1), which involved re-evaluating life perspectives and personal attitudes due to the war (Pypenko et al., 2023).

A separate study conducted in the spring of 2022 among European university students identified links between anxiety and macroeconomic conditions. Researchers highlighted dominant emotions such as anger, anxiety, hopelessness, and hope (Pavlova & Rogowska, 2023). Previous research by Boichak and Jackson (2020) analyzed shifts in Mariupol residents' moods during 2014–2015, but further studies on the information

and communication aspects of the 2022 invasion are needed. The role of Ukrainian and foreign journalists in covering the war has also been examined (Springer et al., 2022). This study contributes to the literature by focusing on students, particularly future journalists.

Discussion

During the full-scale invasion, Mariupol was under siege from March 2 to May 20, 2022. People lived under an information blockade as mobile communications and electricity were cut off, making it impossible to access the internet, mobile, or digital communications. Additionally, there was a broader societal blockade due to shortages of gas, water, food, and medicine amid active hostilities.

Most students remained with their families, as they were local residents, while those from other cities stayed in dormitories. The absence of electricity and mobile communication limited the spread of Russian propaganda through social media. However, some residents used generators to charge their devices and received SMS messages from the invaders encouraging them to cooperate against Ukraine's defenders. People also relied on outdated car stereos or portable radios tuned to medium or long frequencies for news. In Mariupol, Ukrainian radio stations were jammed, and Russian-controlled broadcasts replaced them.

Saboteurs infiltrated public places such as queues, spreading propaganda. The key narratives included:

- “Peace will come in two days; you will get bread when the new government comes.”
- “Ukraine no longer exists.”
- “Kyiv has fallen; the Armed Forces have surrendered.”
- “The government has abandoned you” (Melnykova-Kurhanova, 2024).

Oral interpersonal communication intensified in the yards and in queues, where spread rumors.

Local information about safe places in Mariupol was quickly generated.

Interpersonal communication became crucial. People left handwritten notes on doors or wrote chalk messages on walls to inform others of their whereabouts. One student mentioned leaving a note for relatives about where they had sought shelter. Oral group communication was also prominent, with representatives of the National Police of Ukraine providing official updates and answering questions. Leaflets were distributed as well.

Some students kept diaries or notes on their phones. One interviewee described conserving her phone's battery by keeping it in warm clothes due to low March temperatures. She managed to photograph her burning multi-story building after shelling. After reaching government-controlled Ukraine, she shared her survival story through these photos on Instagram. Another respondent also shared his story of leaving the city under siege on Instagram, as content in this format lasts for a day and then disappears. The students chose the story format to document their experience, as the temporary nature of the format helped them avoid revisiting traumatic content.

The absence of electricity, and later mobile communication, hindered the spread of misinformation and hostile propaganda. However, invaders sent targeted SMS messages to intimidate people and encourage them to betray Ukrainian soldiers. Respondents noted that discussions about these messages often took place while waiting in water queues or gathering around campfires.

Pro-Russian propaganda was spread through agents posing as locals, hijacked vehicles displaying Russian insignia, and staged interactions in queues. The lack of formal communication channels led to an increase in rumors and oral communication, including discussions about safe evacuation routes. Unfortunately, many of the early convoys leaving Mariupol were attacked.

Despite these conditions, students actively sought information. While Facebook, YouTube,

and Instagram were used when possible, Telegram and Viber became the primary sources of news due to their efficiency in low-bandwidth conditions. Telegram was unanimously identified as the main communication tool. However, Instagram was only utilized after students had escaped the siege, as weak internet connectivity prevented photo uploads.

Interviewee 2 mentioned accessing news through local Telegram channels such as Mariupol Now, Mariupol 24, and 4ch Mariupol. They also followed Mariupol War and watched local TV channels before the power outage.

The survival experiences of Mariupol students varied. Open sources document cases of foreign students being tortured due to their unclear appearance, as water shortages prevented bathing for weeks (Kovalenko, 2022). In October 2024, student Serhiy Yarovyι was released from captivity after being taken prisoner while defending Mariupol and Azovstal (MDU, 2024).

Students recalled the games they had played and how they had survived them. One student from the dormitory mentioned in open sources that he enjoyed playing strategy games and understood that war was inevitable. He explained that in the game *Civilization*, an occupier would first amass military forces near the border before launching an attack (Osadcha, 2022).

Interviewee 1 shared his experience of preparing for a possible city siege:

“As a child, I spent about 90% of my leisure time playing computer games, aside from school. From these games, I memorized the basic rules of survival during an apocalypse. That is why, on the very first day – February 24, 2022 – while most people rushed to buy food, I bought batteries for a radio that operates on M-frequencies, allowing it to receive long and medium waves. Thanks to this, I was able to listen to Khreshchatyk Radio and Suspilne Radio.”

Interviewee 3 recalled that one of the students found a battery-powered radio that picked up Ukrainian broadcasts on medium waves. Through

this, they heard President Zelenskyy's announcement recognizing Mariupol as a hero city. However, the occupiers soon jammed the signal, and Russian radio frequencies began to interfere.

Interviewee 4 also described his experience of surviving the occupation and relying on the radio as his only source of information:

"On March 12, 2022, the occupiers completely jammed Ukrainian radio. We had two choices: either remain in an information vacuum or listen to enemy radio, which was filled with false propaganda."

Interviewee 5 shared that he was unable to receive Ukrainian radio signals and was forced to listen to Russian broadcasts:

"It was difficult because everything was propaganda, presenting information in a completely distorted way."

During the occupation of one of the city's districts, three out of five respondents encountered enemy propaganda. Interviewee 1 described what he saw:

"I saw several billboards, and there were cars driving around the city with the letter 'Z,' slogans like 'We do not abandon our own,' and St. George's ribbons. Near the largest supermarket, the occupiers set up a tent for the ruling United Russia party, distributing leaflets and newspapers. Propaganda materials were even included in humanitarian aid packages."

Interviewee 2 recalled an instance when she and her neighbors ran out of food and were forced to go into occupied territory to receive humanitarian aid:

"In the occupied district 23, the occupiers were distributing humanitarian aid. People gathered in groups and walked dozens of kilometers under fire to get food. On the way, I saw many people carrying boxes marked with the letter 'Z.' That was the first time I saw enemy symbols up close."

By March 2022, the city had lost all mobile communication. The Russian army first shelled mobile and internet infrastructure before jamming signals entirely. During the partial occupation, in

April 2022, the Russian military installed its own mobile phone towers and initially distributed DPR 'Phoenix' SIM cards for free before eventually selling them.

Interviewee 2 recalled how propagandists announced through loudspeakers that they were distributing Phoenix SIM cards. The demand was so high that long queues formed, and not everyone was able to get one. People waited in line for hours just to call their families and let them know they were alive.

Interviewee 3, who lived in a dormitory during the siege, described how students adapted:

"My fellow students and I would turn on our phones only a few times a day to conserve battery. We climbed to the ninth floor of the dormitory, where the reception was best, to download news headlines about the situation in Mariupol. We would read them quickly and then turn our phones off again to save power."

Interviewee 4 noted that hostile mobile communication infrastructure was set up before the so-called "filtering" of the population began.

Interviewee 5 shared that he had to dispose of his mobile phone when leaving the besieged city to pass through Russian checkpoints:

"Phones were thoroughly inspected for pro-Ukrainian content. It was dangerous to have social media profiles that could be seen as supportive of Ukraine."

The impact of Russian mobile communication tactics in Ukraine was studied by R. Horbyk (Horbyk, 2022).

Conclusion

Mariupol students endured extreme hardships, including a lack of electricity, internet, and mobile communication, as well as shortages of heating, water, and food. Some had preemptively stocked up on radios and batteries, while others relied on social media when possible. Telegram emerged as the primary information source, with Instagram

used post-siege for sharing experiences. Students also described Russian efforts to control communication through billboards, humanitarian aid, and direct verbal propaganda.

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References

- Boichak, O., & Jackson, S. (2020). From National Identity to State Legitimacy: Mobilizing Digitally Networked Publics in Eastern Ukraine. *Media, War & Conflict*, 13(3), 258–279. <https://doi.org/10.1177/1750635219829161>
- Horbyk, R. (2022). “The War Phone”: Mobile Communication on the Frontline in Eastern Ukraine. *Digital War*, 3, 9–24. <https://doi.org/10.1057/542984-022-00049-2>
- Kovalenko, O. (2022). “We Were All Taken Out and Ordered to Undress”—Revelations of a Student from Mariupol Who Managed to Survive. Retrieved April 19, 2022, from <https://www.unian.ua/war/dlya-tortur-bula-specialna-kimnata-odkrovennya-studenta-shcho-vizhiv-z-mariupolya-novini-vtorgnennya-rosiji-v-ukrajinu-11793417.html>.
- Mariupol State University. (2024). *Good News for the Community of Mariupol University—Serhii Yarovyi, a Specialist of the educational and methodological department, returned from enemy captivity*. Retrieved October 23, 2024, from <https://www.facebook.com/watch/?v=1072231187834345>
- Melnykova-Kurhanova, O. (2024). During the Siege of Mariupol in 2022. *Societas/Communitas*. 1(37), Article 107118. <https://doi.org/10.55226/uw.S.-P.2024.37.1.4>
- Osadcha, Y. (2022). *20 Days of Hell: the Story of a Student who Managed to Get Out of Mariupol*. Retrieved April 3, 2022, from <https://life.pravda.com.ua/society/2022/04/3/248080/>.
- Pavlova, I., Rogowska, A. M. (2023). Exposure to War, War Nightmares, Insomnia, and War-Related Posttraumatic Stress Disorder: A Network Analysis Among University Students During the War in Ukraine. *Journal of Affective Disorder*, 342, 148–156. <https://doi.org/10.1016/j.jad.2023.09.003>
- Pypenko, I. S., Stadnik, A. V., Melnyk, Yu. B., & Mykhaylyshyn, U. B. (2023). The Impact of the War in Ukraine on the Psychological Well-Being of Students. *International Journal of Science Annals*, 6(2), 20–31. <https://doi.org/10.26697/ijsa.2023.2.2>
- Raccanello, D., Burro, R., Aristovnik, A. et al. (2024). Coping and Emotions of Global Higher Education Students to the Ukraine War Worldwide. *Scientific Report*, 14, Article 8561 <https://doi.org/10.1038/s41598-024-59009-3>
- Springer, N., Nygren, G., Widholm, A., Orlova, D., & Taradai, D. (2022). Narrating “Their War” and “Our War”: The Patriotic Journalism Paradigm in the Context of Swedish and Ukrainian Conflict Coverage. *Central European Journal of Communication*, 15(2/31). [https://doi.org/10.51480/1899-5101.15.2\(31\).1](https://doi.org/10.51480/1899-5101.15.2(31).1)