

# TRANSFORMING STUDENTS INTO AGENTS OF CHANGE FOR RECOVERY: A FRAMEWORK FOR SERVICE-LEARNING IN UKRAINIAN HIGHER EDUCATION DURING WARTIME

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**DOI:** <https://doi.org/10.36059/978-966-397-609-9-2>

**Keywords:** service-learning; wartime education; agents of change; community recovery; third mission of the university.

## Introduction

The full-scale war in Ukraine has fundamentally transformed the epistemological, social, and practical roles of higher education institutions. Historically operating primarily as centers of traditional knowledge transmission and human capital development, universities must now radically reimagine their paradigms due to the exigencies of an active, high-intensity conflict. Today, universities are shifting from being isolated academic enclaves to becoming active, indispensable participants in societal resilience, regional stabilization, and physical reconstruction. In conditions marked by constant air raid alerts, systematic disruptions in energy supply, and ongoing psychological trauma among students and faculty, universities are required to drastically expand their mission beyond the classroom.

As recent literature on Higher Education in Emergencies (HEiE) highlights, the contemporary university in a conflict zone must be conceptualized as an essential social, political, and epistemic space – a hub of resilience, resistance, and hope in times of extreme adversity [1]. This paradigm shift embodies the activation of the “Third Mission” of the university, which aims to dismantle the historical barrier between abstract academic knowledge and the acute crises facing society. In the context of the Ukrainian war, universities act not merely as educational centers but as key “agents of change” of social transformation, pillars of community support, and catalysts for local innovation ecosystems [2]. They

are tasked with providing scientifically grounded solutions and institutional support for the long-term sustainability of communities facing existential threats.

Thus, based on the conducted analysis, it is established that despite this clear theoretical mandate, immense practical challenges remain. Traditional pedagogical approaches prioritizing theoretical knowledge dissemination fail to address the complexity, scale, and urgency of these local challenges. This is particularly evident in frontline-adjacent territories, such as the Dnipropetrovsk region, which are simultaneously dealing with infrastructure destruction, the massive influx of Internally Displaced Persons (IDPs), and severe economic contraction. A standardized curriculum, designed for peacetime stability, lacks the agility to respond to a community that urgently needs energy audits for bomb shelters or crisis financial literacy for displaced youth.

Furthermore, the psychological toll of living, learning, and teaching within an active war zone cannot be overstated. The educational environment is characterized by chronic threat, uncertainty, and collective trauma [3]. Expecting students to maintain high levels of academic motivation solely for abstract career goals is pedagogically unsound in this context. Thus, based on the analysis of current educational gaps, there is a desperate need for educational strategies offering immediate communal value alongside rigorous academic training. It has been established that the core research problem lies in defining and implementing pedagogical mechanisms that facilitate the transformation of students from passive recipients of knowledge into active “agents of change”. This transformation is an absolute necessity to prepare youth for active participation in national recovery processes while simultaneously mitigating the severe risk of academic burnout and psychological despair.

## Methods

To conceptualize, facilitate, and measure this transformation, we propose a highly adaptive methodology integrating the pedagogical principles of Service-Learning (SL) with robust Community Needs Assessment (CNA) frameworks tailored specifically to a wartime environment. Foundational literature defines Service-Learning as a credit-bearing educational experience in which students participate in organized service

activities that meet identified community needs, followed by structured reflection to deepen their understanding of course content and enhance civic responsibility [4, 5]. In an active crisis, this approach requires students to engage with a pedagogy of “disruptive discomfort,” pushing them to solve unplanned, critical, and emotionally taxing challenges in real-time [6].

The analysis demonstrates that the integration of Service-Learning and Community Needs Assessment constitutes an adaptive methodological response to the challenges of wartime higher education. To ensure academic interventions are accurately adapted to the local context and avoid imposing top-down assumptions on vulnerable populations, this methodology utilizes sociological assessment tools – such as focus group interviews and stakeholder mapping – developed within international frameworks like the ServU-ERASMUS-EDU-2023 project [2]. This ensures a democratic, reciprocal partnership between the university and the territorial community. Empirical data to evaluate the effectiveness of the model was collected through post-course reflective essays submitted by students and semi-structured feedback sessions with community stakeholders. This approach allowed for identifying recurring patterns related to student transformation and community impact

## Results

Based on the conducted analysis, it is established that the transformation of students into “agents of change” is not a spontaneous outcome, but a structured, multi-stage pedagogical process. The proposed methodological framework consists of a dynamic Four-stage transformation cycle, designed to guide the student from the classroom into the community and back to a state of profound reflection:

**1. Identification (Needs Assessment):** This stage initiates the university-community partnership. Students and faculty interact directly with municipal authorities, NGO leaders, and community members to identify urgent vulnerabilities. Rather than relying on generic case studies, students confront real deficits – such as infrastructural damage, lack of digital and financial education, or localized energy instability.

**2. Planning (Academic Alignment):** Once a community need is identified, it must be rigorously mapped to the specific learning

outcomes of university courses. This ensures the project remains a high-level academic endeavor rather than mere volunteerism. Academic integrity, theoretical frameworks, and standardized evaluation metrics are aligned with the community’s objectives.

**3. Action and Impact (Field Execution):** Students execute the planned project in the field utilizing real community data. At this critical stage, they transcend the boundaries of standard coursework. They are no longer practicing for a future profession; they act fully as “agents of change” whose immediate work has tangible consequences for community survival and efficiency.

**4. Reflection (Critical Analysis):** The cycle concludes with structured reflection. Students critically analyze their professional efficacy, the limitations of their theoretical knowledge when applied to wartime chaos, and their emotional growth. This reflection is evaluated alongside technical deliverables.

To elucidate the depth of this methodological shift Table 1 summarizes the key structural differences between traditional academic pedagogy and the proposed wartime Service-Learning framework.

**Table 1. Comparative Analysis of Educational Paradigms**

Dimension	Traditional Academic Pedagogy	Wartime Service-Learning Framework
Primary Objective	Individual human capital development and career readiness.	Community resilience, regional stabilization, and national recovery.
Educational Space	Isolated classrooms, controlled laboratories, and theoretical simulations.	Frontline communities, municipal facilities, and real-world crisis environments.
Role of the Student	Passive recipient of standardized knowledge; consumer of education.	Active agents of change; co-creator of localized, applied knowledge.
Curriculum Driver	Pre-determined state educational standards and historical syllabi.	Urgent Community Needs Assessment (CNA) aligned with academic outcomes.
Emotional Paradigm	Driven by grade acquisition and academic performance anxiety.	Driven by civic duty, empathy, and meaning-making amidst trauma.

Considering the above, it is important to emphasize that running parallel to the four operational stages is a continuous, transversal process of emotional and value-based transformation. In the psychological landscape of wartime, the search for meaning becomes a primary motivator for survival and cognitive function. By directly aiding their communities and seeing the immediate results of their academic labor, students convert chronic anxiety and trauma into proactive civic agency. This transversal component acts as a form of educational therapy, fostering long-term psychological resilience and preventing the academic apathy that accompanies prolonged exposure to conflict.

This comprehensive methodological framework was operationalized and evaluated through two socially-oriented courses at the Dnipro University of Technology. Both courses were implemented in direct partnership with the Chumakivska Territorial Community, a region heavily impacted by the socio-economic and infrastructural fallout of the war. The empirical evidence gathered provides deep insights into the efficacy of the “Agents of Change” Model.

### **Case Study 1: Personal Finance and Economic Resilience**

Macroeconomic instability caused by the invasion, characterized by inflation, job loss, and displacement, necessitates high financial adaptability among youth. To address this, the “Personal Finance” course (4 ECTS credits) was transformed into a Service-Learning practicum.

*Implementation Parameters.* The project engaged 56 finance bachelor students to mitigate economic vulnerability by developing financial literacy programs for schoolchildren in the Chumakivska Territorial Community. The university students acted as direct trainers, utilizing interactive workshops to teach personal budget formation, income and expenditure management under crisis conditions, savings mechanics, and investment resource allocation. A key component was instilling an understanding of entrepreneurship as a viable tool for increasing personal income in an unstable economy.

*Outcomes and Reflection.* Based on the conducted analysis of educational outcomes, the initiative successfully developed the financial, business, and critical thinking competencies of the

target schoolchildren. However, the most profound transformation occurred within the university students. They reported significantly enhanced skills in applying abstract theoretical finance principles to practical, human-centered problems. Furthermore, they demonstrated an increased awareness of personal responsibility for financial decisions. The course instructor noted the dramatic pedagogical shift: *“Thanks to the implementation of the Service-Learning project, students developed a sense of responsibility towards representatives of the territorial community for the results of their work. This contributed to a more responsible attitude to the learning process, a critical understanding of learning outcomes, and better alignment of the developed skills with community needs.”* The motivation was no longer grade acquisition, but the ethical obligation to provide accurate information to the children relying on them.

The results confirm that practical engagement significantly enhances not only professional competencies but also students’ sense of responsibility and agency.

## **Case Study 2: Energy Management and Infrastructural Recovery**

The systematic destruction of Ukraine’s energy grid has rendered energy management a matter of acute national security. Responding to this existential threat, the “Energy Management Systems” course (4 ECTS credits) mobilized students to address municipal energy deficits.

*Implementation Parameters.* This project involved 42 engineering and energy master students mandated to conduct professional-grade energy audits for the Chumakivska Territorial Community. It has been established that using real municipal data rather than textbook scenarios, students utilized modern monitoring tools to analyze the energy efficiency of critical social infrastructure, specifically local schools. Based on their audits, students proposed comprehensive modernization measures aimed at improving energy efficiency, systemic reliability, and supply system safety – factors directly contributing to the physical recovery and winter survival of the region.

*Outcomes and Reflection.* The impact on student motivation was transformative. The realization that engineering calculations could determine whether a school remained heated during a winter

blackout fundamentally altered their disciplinary approach. One student reflected profoundly: *“It is an incredible feeling to understand that you are not just doing a regular laboratory work for a grade, but that your project has real value for society. Our energy modernization project will help save money for the school in the Chumakivska community. It is interesting to participate in the development of a project for a specific community. We would like to visit the community more often – we could offer even more solutions if we had more field trips.”* This encapsulates the essence of the “agents of change”: a professional who is technically proficient, deeply motivated by societal impact, and eager to expand their scope of assistance.

Considering the above, it is evident that the real-world impact of student work serves as a key driver of intrinsic motivation and professional identity formation.

The success of the Service-Learning model is heavily reliant on the utility derived by community partners. Feedback from Chumakivska community representatives underscored the immense practical value of the university’s “Third Mission” engagement:

*“Our community’s participation in the implementation of the socially-oriented course “Energy Management Systems” became an important experience of cooperation with the university and young professionals. We had the opportunity not only to outline our own problems in the field of energy consumption but also to see their professional analysis and modern approaches to solving them. It was especially valuable that students worked with real community data, investigated the energy efficiency of social infrastructure facilities, and offered practical recommendations for its improvement. For the community, this became not just an educational project, but a foundation for the formation of an energy management system and the making of future managerial decisions”.*

This validates the premise that students, when properly guided, can produce professional-grade outputs that directly alleviate the administrative and financial burdens of war-torn municipalities.

The findings indicate that it is necessary to critically reflect on the contextual and methodological limitations of the study. While empirical outcomes present a compelling case for the efficacy of Service-Learning in wartime, it is imperative to critically

acknowledge the limitations inherent in conducting pedagogical research within an active conflict zone.

- **Contextual Unpredictability:** The research environment is highly volatile. Scheduled educational activities, field trips, and data collection phases were frequently interrupted by security threats (air raid alerts requiring immediate evacuation) and infrastructural failures (rolling blackouts). This limits the ability to maintain a controlled, standardized pedagogical setting.
- **Geographic and Sample Scope:** This study focuses on specific courses within a single institution partnering with one territorial community. While the findings are deeply qualitative, they are highly context-specific to a frontline-adjacent region and may not universally generalize to universities in safer regions or different global conflict zones.
- **Longitudinal Tracking Constraints:** A core objective of Service-Learning is the long-term cultivation of civic responsibility. However, due to mass internal displacement, continuous mobilization, and the unpredictable trajectory of the war, tracking the longitudinal career impacts of these “agents of change” over a multi-year horizon is currently unfeasible.
- **Subjectivity in Crisis:** Reflective evidence relies heavily on qualitative feedback gathered during a period of intense, sustained emotional stress. The psychological phenomena of wartime solidarity and a heightened desire for positive impact may influence self-reported data, making it difficult to isolate pedagogical impact from the broader psychological environment.
- **Pedagogical Burden on Faculty:** Transitioning to this model requires an immense expenditure of time and emotional labor to redesign curricula, establish community trust, and manage the psychological well-being of traumatized students executing high-stakes projects, raising questions about scalability without significant institutional support.

## Discussion

The results of the study demonstrate that the implementation of the Service-Learning approach in a wartime context produces measurable educational and social outcomes. For schoolchildren, participation in the project led to the development of financial

literacy, entrepreneurial thinking, and practical decision-making skills. For university students, the impact was significantly deeper and structural.

It can be observed that student transformation occurs through direct engagement with real community problems. Students demonstrated an increased ability to apply theoretical knowledge to practical tasks, particularly in the areas of financial planning and energy efficiency. Importantly, this was accompanied by a shift in motivation: academic performance was no longer driven primarily by grades, but by responsibility toward community stakeholders.

Instructional feedback confirms that the integration of real-world tasks into the learning process leads to higher levels of engagement, accountability, and quality of outputs. This indicates that Service-Learning does not reduce academic rigor but, наоборот, підсилює його через контекст застосування.

The implications of this study can be formulated at three interconnected levels.

At the level of educational practice, the findings confirm the necessity of integrating Community Needs Assessment (CNA) into standard curricula. The cases of “Personal Finance” and “Energy Management Systems” demonstrate that aligning course outcomes with real community needs significantly improves student motivation, critical thinking, and problem-solving capacity. In crisis conditions, theoretical instruction without practical application shows limited effectiveness.

At the level of institutional policy, the results indicate that the sustainability of this approach depends on formal recognition. The integration of Service-Learning components into ECTS frameworks would allow universities to institutionalize community-engaged learning and ensure its scalability. Without such formalization, the approach remains dependent on individual ініціативи and cannot be системно впроваджений.

At the level of community recovery, the study confirms that student-led projects can produce applied, decision-relevant outputs. The case of the Chumakivska Territorial Community demonstrates that student-generated data – such as energy audits – can be directly used in local management processes. This suggests that universities can function as operational partners for municipalities rather than purely educational institutions.

## Conclusion

The results confirm that the experience of the Dnipro University of Technology demonstrates that Service-Learning is not merely a supplementary pedagogical approach, but a essential component of higher education in crisis contexts. By transforming students into active “agents of change”, the educational process remains relevant, practice-oriented, and resilient. The integration of courses such as Personal Finance and Energy Management Systems with the needs of the Chumakivska Territorial Community confirms that academic rigor and societal engagement are mutually reinforcing. The proposed model provides a scalable framework for other conflict-affected or post-crisis regions, demonstrating that universities can contribute to community development and resilience even under disruption.

Considering the above, the findings confirm the transformative potential of higher education in wartime, positioning students not only as recipients of knowledge, but as “agents of change” – active participants in processes of societal recovery and resilience.

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