Changing character of e-learning trajectories at a Ukrainian University: swimming against the tide

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Abstract

The paper aims to describe the contribution of Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University [VSPU] to e-learning in Ukraine that served as a momentum for cardinal transformations in the formats of instruction, content, and engagement of Ukrainian students and professors. With institutional priorities, faculty members' Fulbright commitments and initiatives, and collaborative support of Southeast Missouri State University [SEMO], USA, VSPU has significantly improved technology literacy, intercultural competence, and attitudes to innovation in teacher candidates. The research is empirically based on over ten years of online experimenting with project work that organically became part of university teacher training curricula. The research applies SWOT analysis and qualitative and quantitative methods. The findings demonstrate the evident attitudinal change toward e-education and international collaboration with years of engagement, resulting in relevant teacher preparation. The research concludes that changes in educational trajectories are beneficial and necessary to address global and local challenges.

Keywords: E-learning and educational technologies; institutional priorities and personal initiatives; international collaborative projects; a Ukrainian university

1. Introduction

The augmentation of technology applications in education today is rapid, convincingly justified, and indispensable under some circumstances (Haleem et al., 2022, p. 276; Matviienko et al., 2021, p. 137; Matviienko et al., 2023, p. 162; Sivalingam et al., 2018, p. 16). Reflecting on the tools and application and questioning the impact should go in parallel with planning further

pursuits for developing new educational trajectories within familiar academic planes. Technology integration necessitates additional attention to content delivery and engagement opportunities realization. Furthermore, innovative education today is not viewed as such without technologies because of their "potential" to cognize, modernize, ensure conditions for "spiritual and creative development," and unite in collaborative research (Bykov & Leshchenko, 2016, p. 6; Haleem et al., 2022, p. 277; Kuzmina et al., 2023, p. 89; Matviienko et al., 2023, p. 163). The multiplicity of "ubiquitous technologies" in operation ensures the creation of a "positively integrated reality," affecting institutional priorities and personal initiatives, substantiating belief in the advantages of e-learning over traditional education for international collaboration (Bykov & Leshchenko, 2016, p. 1; Kuzmina et al., 2023, p. 84; Matviienko et al., 2023, p. 163). Computer-assisted, web-based, blended, gamified, and one of the recent developments, AI-generated learning increasingly diversifies the educational landscape and broadens professional horizons (Domenech, 2023, p. 340; Ihnatova et al., 2021, p. 115; Matviienko et al., 2023, p.162; Powell et al., 2014, p. 34; Sivalingam et al., 2018, p. 14). Considering the e-learning development in Ukraine, the authors believe it has been significantly impacted by two dramatic events: the COVID-19 pandemic and the war that began in 2022. They urged Ukrainian education to embark on the way of e-learning exploration, giving this task the utmost attention (Kuzmina et al., 2023, p. 84; Lucenko et al., 2023, p. 2; Matviienko et al., 2021, p. 137; Matviienko et al., 2023, p. 162). The paper aims to share a ten-year experience of the transformative changes at VSPU, a Ukrainian teacher training university, as they resonate with global trends, providing insight into the outcomes of the experience and their potential applicability in other educational contexts.

2. Methodology

The research retrospectively describes the experience of integrating e-learning in teacher education, which began in 2013 with the Fulbright commitments (Powell et al., 2015, p. 381) and faculty members' initiatives from VSPU, Ukraine, and SEMO, USA. Sustained by institutional priorities for e-learning, the initiatives evolved into several online projects that added a significant global perspective to teacher training at VSPU. For over a decade, foreign educators have taught VSPU students different aspects of teacher preparation. The research objective is to examine the initiatives for transformative outcomes in professional training and attitude change. The data collection is based on an annual analysis of students' surveys on Google Forms. Some feedback was self-reported verbally. However, more than 1500 posts in the Forum discussions have been analyzed to identify differences in perceptions. The survey questions addressed the attitudes toward e-learning and educational technologies' role in innovation, international collaboration, content relevance, and interest in projects by years of engagement. Research procedures encompassing reflecting on technologies in operation and the projects' content through the SWOT analysis applied descriptive, qualitative, and quantitative

methods. The sample group included Ukrainian undergraduate and graduate students in English language education enrolled in the Department of Foreign Languages at VSPU from 2013-2023. The age category is mainly 20 through 22, with a prevailing female-student ratio of 1:10; students are mostly city and village dwellers of largely Vinnytsia and Vinnytsia Oblast.

3. One University Contribution to E-learning in Ukraine

3.1. Institutional Priorities and Personal Initiatives Matter

To better understand the contribution of VSPU to e-learning, it is worth mentioning that in Ukraine, education, like in many post-Soviet countries, was traditional primarily before 2019, when "despite solid governmental support," online practices were "sporadic and uncoordinated," and students were "ill-prepared" to work online (Blayone et al., 2018, p. 1; Matvienko et al., 2021, p. 136; Powell et al., 2014, p. 35; Powell et al., 2015, p. 382). "Slow integration of technology," "insufficient material and technical base," "lack of experience to create online infrastructure and curricula," "limited financial resources and low digital readiness among students and teachers" were common and slowed down the advent of e-learning (Blayone et al., 2018, p. 2; Lucenko et al., 2023, p. 2; Matvienko et al., 2021, p. 137). However, due to "institutional priorities and faculty members' initiatives" (Powell et al., 2015, p. 381), VSPU made "remarkable progress swimming against the tide" (Powell et al., 2015, p. 383; Matvienko et al., 2021, p. 142). Web-blended education [WBE] was initiated in 2013 as "an online learning pilot project," *Teacher Candidate Preparation in US Universities*, an outcome of the Fulbright service, which became "an exciting experience" in online collaborative coteaching (Blayone et al., 2018, p. 2; Matvienko & Kuzmina, 2020, p. 166; Powell et al., 2014, p. 36). Since the university did not have its LMS, Google Apps with Java runtime were adjusted for free use to provide the logistics for asynchronous learning and navigation. Skype-enabled synchronous meetings brought together 78 graduates and four guest lecturers from SEMO once a week for an hour to work on the essentials of US teacher training. According to Powell et al., 2015, the excitement of gaining knowledge from American professors (27%) through "e-learning interaction" (32%) and "engagement" (28%) made positive feedback. However, the need for technology for individual use, the Internet, self-organization, and time management issues were challenges. Understandably, the main difficulties were fear of the unknown mode and lack of experience working online. Probable threats were related to weaknesses. The authors are prone to believe that 12% of students who regretted the reduced teacher control (Powell et al., 2015, p. 383) were subject to fear of learning on Google Apps (Table 1).

Table 1. Teacher Candidate Preparation in the US via SWOT Analysis.

WBE Projects.	Strengths	Weaknesses	Opportunities	Threats
Teacher Candidate Preparation in the US (2013-2014)	Introduction of online education. Creating online infrastructure on Google Apps. Skype for work International professional collaboration. Improved English Skills	Lack of experience to work online. Time management Self-control. Poor quality of Skype and weak Internet signal	To integrate web-blended-learning. To explore American teacher education. To learn from native speakers-experts	High anxiety level. Loss of interest/disappointment Language barrier fears

In the *Web-Blended Education for English Skills* project (2014-2018), Google Apps and Skype remained in use as available. However, the scope of international engagement and content was significantly broadened. Eleven foreign instructors worked on the methodologies of teaching grammar, reading, intensive English, academic writing, composition, academic honesty, and British and American literature. Weekly F2F sessions and forum discussions afterward were integrated into the compulsory Ukrainian class, Methodologies of Teaching English. Google Forms surveyed students' attitudes, and based on the feedback, the SWOT analysis identified much in common with the first WBE project (Table 1). Positively, 100% of students singled out the crucial role of technologies; 98% viewed exposure to international collaboration as a strength, albeit 73% of students were still hesitant about the advantages of e-learning over traditional. Deadlines and academic honesty issues in the forums were challenged. The authors tend to relate the doubts about the benefits of e-learning (73%) to anxiety issues stemming from the non-traditional class format. The *Facebook Movie-Based Discussions Club* (2015-2020) was initiated as an academic cross-cultural and informal exchange. It engaged Ukrainian 3rd-year students and language instructors, SEMO professors, and members of their families (Lisnychenko et al., 2022, p. 439). The project allowed the participants to interact at their convenience in the FB closed group, discussing American traditions and social and cultural issues depicted in the films, which sustained values education and intercultural awareness. Despite some time management and organization issues about 23% of students faced and about 50 % experienced cultural differences, students' engagement reached 100%, with positive feedback from 98% of participants. Additionally, 100% of participants approved of exchanging personal experiences and memories evoked by films, which made the atmosphere home-like and film analysis deeper, reducing the number of shy about sharing frankly to only 7%. The project similarly addressed the issues of gender, special, and human rights education (Table 2).

Table 2. Facebook Movie-Based Discussions Club via SWOT Analysis.

WBE Projects.	Strengths	Weaknesses	Opportunities	Threats
Facebook Movie-Based Discussions Club (2015.-2020)	Strengthening values education and intercultural competence. Cross-cultural exchange through films. Gender, special, and human rights education. FB for learning	Required extra time to watch films. Much writing. Spending many hours before the computer	To develop an understanding of shared human values and intercultural competence. To improve writing, critical thinking skills	Fear to tell/write the truth to expect polite answers. Cultural misunderstandings that cause frustration and hot discussions

3.2. Responding to Global and Local Challenges

If the pandemic was an "unprecedented" challenge of "crash course immersion" in e-learning (Lazarenko & Ihnatova, 2022, p. 8; Matvienko et al., 2021, p. 137), the war became a tragedy. Resuming teaching two weeks after the war broke out technically relied on the lessons learned from the pandemic (Matvienko et al., 2021, p. 139; Kuzmina et al., 2023, p. 84). *The Interdisciplinarity Approach to English Language Teacher Education* project (2019-2024) was meant to stay connected globally despite physical isolation. Therefore, the project developed into a 2-credit elective class designed on Moodle, with instructors from SEMO and 13 other US universities - members of the NGO GCUE educational organization (Kuzmina et al., 2023, p. 86). The focus was on technologies, academic integrity, methodologies of TESOL, internationalization, inclusion, gamification, social-emotional learning, culturally-based assessment, and cultivating kindness. During wartime, the partners-in-education doubled their effort in educational and emotional support. As a result, 100% of students appreciated such support, 96% believed in e-learning for gaining education under war conditions, and 100% understood the strengths and opportunities of interdisciplinarity for language studies (Table 3).

Responding to the war, COIL projects, *Kindness and Trauma-Informed Teaching"* (2022) and "Computer-Assisted Language Learning (CALL) (2023) were integrated into the "Traditions of Academic Collaboration: International Experience" and "Interdisciplinary Approach to English Language Education" elective classes at VSPU. The Kindness project united graduates of VSPU and the University of Worcester, USA, to collaborate on combating violence in the USA and the stress of war in Ukraine with a focus on skills for the after-war recovery of Ukraine (Kuzmina et al., 2023, p. 85). The applied modes of engagement ensured communication during F2F Zoom meetings; meanwhile, asynchronous tasks were performed on Google Classroom. SEMO's initiative, the Computer-Assisted Language Learning (CALL) project, was a sign of goodwill and support for the Ukrainian undergraduate program during wartime, adjusting the

CALL approaches to the war conditions and cross-cultural communication. The SEMO LMS CANVAS was hospitably offered as a platform for registered Ukrainian students in the Online Methodologies of TESOL class to conduct asynchronous research and explore American university online infrastructure along with professional and ethical policies. Through the SWOT prism, based on the observations and surveys, the two students' COIL projects had apparent strengths for personal (70,4%) and multiple opportunities for professional growth (93.8%). In students' opinion (100%), the weaknesses and threats were related to blackouts and air raid alerts. However, both projects' mission was to teach how to cope with them.

Table 3. Interdisciplinary Approach to English Language Teacher Education via SWOT.

WBE Projects.	Strengths	Weaknesses	Opportunities	Threats
Interdisciplinary Approach to English Language Teacher Education (2019-2024)	Introduction to Moodle, ZOOM, Google Meet, Google Classroom. Interdisciplinarity. Acquiring the skills of the 21st-century teacher	High-level anxiety because of the sudden transition to distance learning. Fears that knowledge would not be relevant	Introduction to distance education. To understand the importance of interdisciplinarity in English teacher training	Increased stress due to the pandemic and war.Technology deficit. Increased inequality. Insufficient understanding of interdisciplinarity

4. Summarising Experience and Making Conclusions

Irrespective of the challenge, "swimming against the tide" has made a difference. VSPU's initiatives catalyzed the transformative change in technology, content, and engagement. The transformation of attitudes is apparent when comparing the first project's feedback with that of later ones: *flexibility, novelty, interaction, and engagement* were marked as essential (Powell et al., 2015, p. 383). The answers to the questions, "Was the project interesting? What can you suggest for improvement?" did not always sound reassuringly optimistic: "Yes, it was interesting, but the time difference was inconvenient," "Yes, but too much writing in the Forum was tiring," "Yes, it was, but I felt nervous to answer and ask American professors questions." The suggested improvements were concerned with time management and organization and complaints about the quality of technology, resulting in a reluctance to join forums timely. Nevertheless, the years of e-learning experience led to evident maturity. From 94 to 98% of students emphasize as mandatory "*learning from native speakers*, t*echnology literacy, international collaboration, intercultural awareness, establishing long-term professional contacts, broadening outlook, learning innovative methodologies, implementing an interdisciplinary approach to knowledge, commitment to innovation.*" The positive shift is also evident in the understanding of goals by 100% of students; 100% attest to the decisive role of

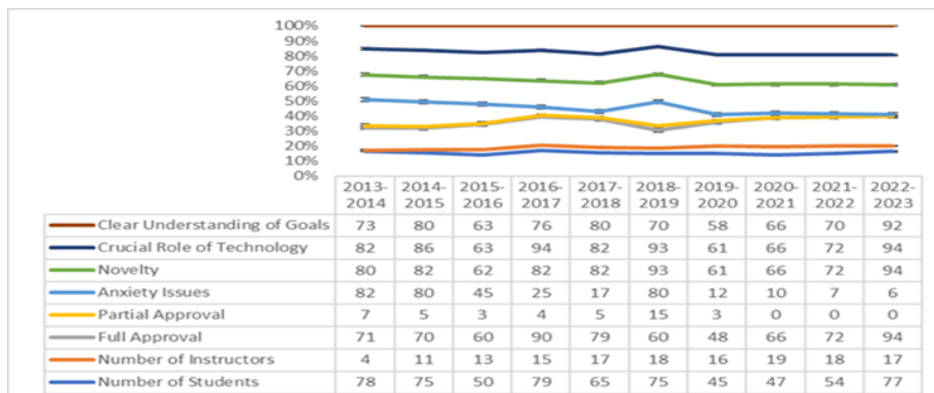|	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Clear Understanding of Goals	73	80	63	76	80	70	58	66	70	92
Crucial Role of Technology	82	86	63	94	82	93	61	66	72	94
Novelty	80	82	62	82	82	93	61	66	72	94
Anxiety Issues	82	80	45	25	17	80	12	10	7	6
Partial Approval	7	5	3	4	5	15	3	0	0	0
Full Approval	71	70	60	90	79	60	48	66	72	94
Number of Instructors	4	11	13	15	17	18	16	19	18	17
Number of Students	78	75	50	79	65	75	45	47	54	77

Figure 1. Changes in attitudes toward participation in online projects by years

technology, with 100% of students' full approval and 100% of teacher candidates' marked novelty. Anxiety in the classes is reduced significantly (Figure 1).

Questioning about the interest in and suggestions for improvement of later projects revealed, "*I like it because of e-learning opportunities to transcend physical boundaries; I like oral and written communication with American professors; it broadened my professional outlook; it was good to know about equity, race, special education; good to know about online methodologies and how to teach during the crisis; all the lecturers motivated to achieve more in my profession; it prepares us for present challenges.*" Prevailing suggestions for improvement advised, "*more lectures and practical courses with American instructors; to have more joint classes and COIL projects with prospective American teachers; make the number of students in groups less to have more communication with professors.*" Based on the research results, the inference is made that the impact of VSPU's priorities and initiatives on teacher education is evident, and the effect is transformative and long-lasting. New knowledge acquisition strategies, content delivery formats, and substantiated opportunities for international collaboration to develop in future teachers a habit of celebrating innovation and striving for quality and high standards are necessary for Ukraine to prosper as a nation and to be prepared to withstand global and local challenges.

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