

Using Web-Blended Learning In Ukraine To Facilitate Engagement And Globalize Horizons: A Pilot Study

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ABSTRACT

After two decades, Ukraine still struggles to establish consistent expectations and a research base of classroom applications to modernize distance education technology and pedagogies aligned with international standards. This report analyzes student feedback from a web-blended pilot class in the foreign languages teacher education program at Vinnytsia State Pedagogical University to identify factors that contributed toward student engagement and learning. The class used Skype technology to present guest lecture/discussion sessions hosted by international speakers. A free Google Education Application was used to provide access to instructional materials and conduct biweekly asynchronous forums moderated by local and guest faculty. Student feedback indicated increased engagement and interest in course content through ease of access, flexibility in scheduling, increased opportunity for self-expression and development of ideas, and exposure to varied perspectives. Students also noted issues with reliability of internet service, message load and time management, and made recommendations for improvement.

Keywords:

INTRODUCTION

Distance Education in Ukraine

Since achieving independence in 1991, the Ukrainian government has engaged in a continuing struggle to modernize education and align with international standards in technological delivery and pedagogies. In 2000, the Ukrainian President endorsed support for Internet access in Decree #928 (Alekseychick, 2001). Order No 293 of the Ministry of Education and Science (MES) in July 2000 created the Ukrainian Distance Learning Center at the National Technical University, Kyiv Polytechnic Institute "to create a viable system of post-secondary educational options throughout the country." (Shunevych, 2002; EdNU, 2010). This initiative was expanded on April 17, 2002 by Presidential Decree No. 347 "On the National Doctrine for Education Development," which "established a pedagogical experiment in distance learning," via a consortium of six universities. On January 21, 2004, MES issued Order #40 "On approval of distance education" formalizing distance education policies.

Ukraine joined the Bologna Process on May 19, 2005 (Education Portal, 2013), pledging to align the national system of education with the goals of the European Higher Education Area by 2010. One of the requirements was "the further development of distance learning," (MES, April 19, 2013). In 2005, the state program "Informational and Communicative Technologies in Education and Science in 2006-2010" was approved with the vision of "providing all Ukrainian schools and colleges with modern computer equipment ... establishing special regional centers of distance education and local internet networks in universities," (Government Portal, August 12, 2005).

This flurry of initial government sponsorship appeared to dwindle for several years. Interest re-emerged in 2011, when "development of distance learning in-service training, [and] optimization of work plans by reducing obsolete forms of work and themes" was among ten priority areas for the coming year. "Training of teachers for informatics" was of particular interest (Government Portal, September 12, 2011). In 2012 and 2013, there was a significant surge in renewed government support for distance learning in Ukraine (Ministry of Education and Science: October 17, 2012; January 18, 2013; April 19, 2013; April 23, 2013; June 12, 2013; June 17, 2013). On April 25, 2013, Order No. 466 "On approval of distance education," updated and superseded the 2004 law with extensive definitional and logistical support.

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It is difficult to arrive at a definitive portrayal of the status of distance learning in Ukraine. Despite a solid foundation of official government support, implementation has been sporadic and uncoordinated. Even the MES press release of June 17, 2013, acknowledged that "For many years in Ukraine there was not a clear idea of distance learning" and "different approaches to its organization in different schools," resulted in negative and low-grade examples that adversely affected public perception for this form of learning.

An Internet search yields as many as 30 claimants to research or practice in distance education, but this can be misleading. Many "hits" lead to sites with references that are outdated or without substance. Almost half of the sites listed on the MES Distance Education site (2013) are dead links, duplicates, or links to commercial software and news sites. Many courses or programs that are functional appear little different from correspondence courses or remote lectures and tutorials using broadcast television or Skype technology. Nevertheless, there are as many as eight to ten institutions significantly involved in exploring and implementing innovations in distance education. However, an online literature search yielded very few case study research reports on implementation.

Lack of funding remains a significant barrier, especially for smaller districts and institutions, spurring partnerships with foreign universities and even individual donors to develop distance education courseware and purchase equipment (Shunevych, 2002; Yamchynska, personal communication, March 2013). Other barriers include lack of faculty experience compiling distance education courses (Shunevych, 2002), as well as the psychological unpreparedness for technology-driven self-education (Klokar, Benderets & Borbit, 2011; MES, January 18, 2013). Lack of computer literacy, especially for older teachers, and a continuing shortage of adequate computer access limit implementation, especially in "remote rural districts" (Klokar, Benderets & Borbit, 2001, p. 94). Lack of standards contradictory expectations, and juridical issues pose additional impediments (Valiliev, Lavrik, & Lyubchak, 2007; Klokar, Benderets & Borbit, 2011; MES, January 18, 2013).

Distance Education at Vinnytsia State Pedagogical University

According to Oleksandr Shestopalyuk, Rector of Vinnytsia State Pedagogical University (VSPU) "Introducing technology into teaching is one of the most noticeable traits of great change that will take place in the future of Ukraine through today's changes in education" (Personal communication, 2013). As of January, 2013, VSPU had installed 900 computers, 50 of which were equipped with SMART Boards. The Department of Foreign Languages alone has three computer laboratories and five SMART Boards, all with access to the Internet. In AY 2012, the university launched the "Dean's Office" program for administration and record keeping. In accordance with MES Order No. 466 (2013), professors are now required to have an electronic variant of their handouts and tests, electronic manuals are being developed for student use, and professors and students have access to the Internet in the university library, as well as computer labs/centers.

According to Tamara Yamchynska, Dean of the Institute of Foreign Languages (Personal communication, 2013), "Instructors [at VSPU] are required to use technology, but not all are eager to quickly change their attitudes to teaching with technology." On the other hand, "many of them don't need to be required as they understand the potential of technology and its benefits for making the educational process more effective. It's getting difficult to be assigned to [a] room equipped with [a] SMART Board to conduct class because they are in demand among the university instructors."

On May 29, 2013, Protocol No. 11 of The Meeting of the Scientific Council of the Institute of Foreign Languages at VSPU formalized the strategic commitment to further implementations of technology in the educational process. However, economic constraints limit the pace and scope of this implementation as does the need to build a critical mass of support among faculty. According to Rector Shestopalyuk, "We would like [to focus] on integrating online teaching, developing all possible formats through international collaboration, which would become the leverage toward growth in the use of technology in our university." The web-blended class Teacher Preparation in U.S. Universities was "the first step on the way to enlarging the opportunity of international collaboration and integrating online teaching into the syllabi of our university" (Personal communication, 2013)

Using Technology as a Lever to Transform the Learning Experience

The use of communication and information technology presents a challenge to use "technology as a lever" to transform higher education through innovative techniques and engaging pedagogies unique to the opportunities (and demands) inherent to the technological environment (Chickering & Ehrmann, 1996). Following the *Seven Principles for Good Practice in Undergraduate Education* (Chickering & Gamson, 1987), these elements are:

- Interactive contact: Asynchronous communication technology offers immediate and flexible access for outof-class contact, interactions, communication, and reflection, encouraging participation, especially among shy students. This can be particularly important when one or both parties is not a native speaker of English.
- Collaboration: The flexibility of electronic communication opens new avenues for distributing tasks to engage

and manage student collaboration.

- Active learning: Technological support can promote active learning through hands-on application in practice to simulate real-life tasks and the use of primary research links to enrich discussions.
- Feedback: Electronic communication, with built-in access to in-text editing and rubrics and templates, simplifying the provision of feedback and interactive tutoring through the development of multiple drafts.
- *Time on task:* Online learning allows students and teachers to schedule work at personally convenient times with reduced time spent physically locating resources, and more time to focus attention on critical tasks.
- Communication of high expectations: Technology makes it easy to post and access assignment directions, rubrics and scoring guides, as well as an extensive library of exemplars, so students can use them to gauge proficiency before submitting work.
- Diverse talents and ways of learning: Students who are progressing rapidly can move ahead; those who need remediation can receive it as needed. The wide variety of media and formats increase the ability to meet varied learning styles and preferences, which can increase engagement and comprehension.

METHODS AND PROCEDURES

For our pilot class, "Teacher Preparation in U.S. Universities," we chose a web-blended model to combine face-to-face instruction with a parallel sequence of online activities. We used Skype to add multiple guest sessions with four American university professors as co-teachers and a collaborative class session with U.S. teacher candidates, providing diverse first-hand input on various course topics (Friend, M., 2008). Skype sessions were accompanied by asynchronous forum discussions, with the guest speakers acting as co-moderators to continue the discussion beyond class, thus encouraging students to relate course topics to personal experience. Such cross-cultural exchanges opened new horizons contributing to a better understanding of educational issues and practices. It was equally important to create an English language environment as a venue for teaching English through oral and written communication with native English speakers. The authentic application of conversational and written English in class discussions served to reinforce the authenticity of subject matter presented by the invited co-teachers as pedagogical experts or teacher candidates actually involved in teacher preparation in U.S. universities.

The pilot class was comprised of 78 students divided into three sections. This conforms to usual course structures at VSPU, with a large lecture course and smaller recitation groups. Originally each section was meant to have its own questions, with the overall discussion record visible to the entire class. However, in practice, the students treated the schedule of questions as an open menu to which they responded cafeteria-style, choosing and participating in the questions that most interested them. Participation in lectures and forum discussion was valued at 65% of the course grade with a minimum expectation of three posts per forum topic. The remainder of the final grade was divided between a mid-term test and various written assignments.

The class was set up using Google App engine with Java runtime. This is a free program with a message and broadband quota that is reset daily. The daily limit was only reached three times in the entire semester. A freelance computer technician was recruited to set up the class, which took about two months of "spare time," including Java development. This technician continued through the semester as web administrator, which required little ongoing commitment, since no additional design features were required.

Student perceptions regarding the format and effectiveness of the pilot class were collected using five openended student evaluation questions posted in the class forum:

- Q1 What did you like most about the online discussion format (the discussion itself, not issues of access or scheduling)?
- Q2 What did you like least about the online discussion format (the discussion itself, not issues of access or scheduling)?
- Q3 What did you find convenient about using web-blended learning techniques? Did this process enhance your understanding of class topics?
- Q4 What was awkward or difficult about using web-blended learning techniques? Did this process hinder your participation in class discussions?
 - Q5 What would you add, subtract, or change in future applications of web-blended learning at VSPU?

RESULTS

Responses were analyzed using the constant comparative techniques of grounded theory as described by

Creswell (2009) and Strauss and Corbin (1998). Verbatim responses were copied into a Word file and non-substantive posts (duplicates, corrections, thanks, etc.) eliminated. This resulted in 59 valid respondents for at least one question, resulting in a gross response rate of 76%. Each response was analyzed to determine irreducible content units, which were open-coded and sorted to re-group content units and eliminate repetition for any one respondent within a given prompt. This resulted in 660 total content units. For the valid respondent portion of the class, the number of responses per student ranged from zero to 26, with a mean frequency per student of 11.2.

During initial coding, it became obvious that some units were posted under a question to which they did not apply. These were re-grouped under the appropriate prompts and set aside for later analysis. Axial coding was used to group the original 660 units of analysis by similar content, collapsing the number of discrete response types to 153. Selective coding was used to collapse the axial codes into a small number of conceptual blocks per question. Once again, some blocks were moved to better align responses with the prompts and after consolidation of content units by prompt another nine redundant entries were eliminated. The final grouping included 6 categories each for Q1 and Q3, 5 categories for Q2, 9 categories for Q4, and 8 categories for Q5.

Positive Factors (Q1 and Q3)

Figure 1 shows a graphic comparison of the number of content units identifying elements of the web-blended experience that they "liked the most. The factor students cited most frequently was interaction with students and faculty (67 responses) especially the opportunity to interact with American professors (25) and several aspects of web-blended discussion as a platform for expression (26). The second-most frequently identified element that students liked most was related to course work (56 responses), with an almost equal split between elements of format that facilitated learning (29) and favorite content topics (27). Students mentioned in particular that they liked the online lectures (6) and they especially liked the fact that they were lectures by American professors (5). Half of the content-related comments focused on general utility and interest of course content.

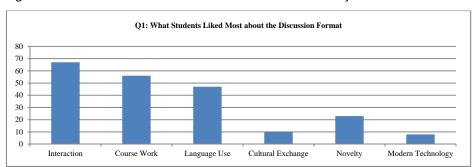


Figure 1. What students liked most about the online discussion format

Students also identified the potential of web-blended discussion and Skype lectures to practice language skills through first-hand use (47 responses) and participate in cultural exchange (10) in ways not possible in a traditional face-to-face environment. The importance of such interaction is probably underrepresented in this analysis, since many elements attributed to other categories could probably just as well fit here. The last two elements that students identified as ones they especially liked focused on novelty (23 responses) and the use of modern technology (8).

A graphic summary of positive comments attributed to the web platform or pedagogical structure of web-assisted learning is presented in Figure 3. Almost half emphasized ease of access (67 responses), in particular "anytime convenience" (31) and the ability to "work at home" (17). Access to course materials was also considered a major asset (14). The most commonly cited benefits to time management were "saved time" (9), and the ability to work at home (4). Twelve students cited the opportunity to practice technology applications and model technology for future use. Another major group of responses targeted the ability of students to engage with learning (43) and broaden its scope (14) beyond the confines of a traditional classroom. This broadening was attributed to more time to think (13) and express oneself fully (4), integrating learning with in-class lectures (3), stimulate thinking and learning (6), exercise choice (6), and express oneself freely (7).

Fourteen respondents emphasized the ability of an online platform to open horizons and increase the scope of what was available for learning. Web-bended learning was credited with the inclusion of more points of view (7), in particular, through online lectures with American professors and the opportunity to talk with American students.. Five students mentioned that the availability of timely and continuing assistance from the co-instructors of this course was convenient or an enhancement to learning.

Q3: Structural Elements that Were Convenient or Enhanced Learning

70
60
50
40
30
20
10
Access Engagement Scope Technology Time Mgmt. Benefits Help
Applications

Figure 3. Structural elements and techniques that students found convenient or enhancing to learning.

Negative Factors (Q2 and Q4)

Negative responses addressing class interactions and the discussion process format were consolidated under Q2 (see Figure 2). What students least liked about the online discussion format was the message load (39 responses), with complaints about too many messages (8), repetition (20), and the challenge to think of new things to say (11).

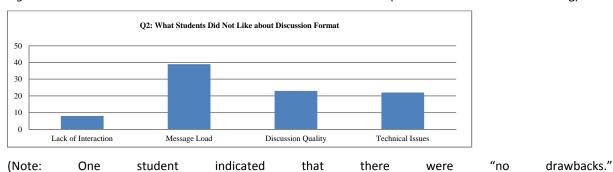


Figure 2. What students liked least about the online discussion format (not issues of access or scheduling)

The second largest group of negative responses referred to the quality of discussion, including disdain for using the Internet as a ready resource for information (7), which was regarded as "cheating" or "unoriginal." Others cited lack of substantive content in student posts (5) or copying from other students (1). Five comments blamed the grading system, which was perceived to favor quantity over quality and one student linked poor discussion quality to group size. Two comments declared discussion questions were" too concrete" or involved "too little preparation." Other technical issues (22) included the inability to edit posts (8), character limits (2), lost messages (5), and inadvertent duplication of messages (3). Two student comments cited inability to organize and direct replies.

Responses that identified negative experiences with access or scheduling were consolidated under Q4 (See Figure 4). Most of these were related to time management (12 responses) and access (37). Access included poor connection quality (16) lack of Internet access at home (10), and intermittent problems with the course site (7). Eighteen responses focused on technical issues with forum discussions, personal responsibility, and the inconvenience of scheduling Skype across eight time zones (5). The most common comments about discussion access were the perceived insufficiency of two weeks per forum (13) and time lag in asynchronous discussions (4).

Q4: What Hindered Participation? 35 30 25 20 15 10 5 0 Message Load Tech Issues Time Mgmt Time Zone Individual Access Timing Issues

Figure 4. What was awkward or difficult about using web-blended techniques, hindering participation?

(Note: Two students indicated that there was nothing they would recommend changing.)

Some aspects of the discussion format were addressed both as pedagogical concerns under Q2 and as platform issues under Q4, such as message load (6) leading to challenges to originality (8). One student commented on difficulties posed by excessive off-task posts. Message duplication (3) and frustration with character limits (1) were cited as well. Repetition of messages, loss of messages, and the inability to edit were not mentioned as technical issues.

A small number of respondents simply found the online format uncomfortable (5). Some of the discomfort was due to unfamiliarity (3), and two students were reluctant to take part due to shyness. One commented that "it was really hard to be active in front of teachers from America and another declared that it was "quite uncomfortable to do 90% of work on-line."

Changes Suggested by Students

Figure 5 presents a graphic summary of changes suggested by students to improve the use of web-blended applications in this course or in general across the university. The largest group of comments was directed toward the inclusion of more contact with Americans (34 responses), both with professors (12) and fellow students (22). Fourteen respondents specifically wanted to add American students to online discussions. Suggestions to improve discussion forums included reduction in group size (14), more time per discussion (3) and limitations or rules to regulate frivolous or copycat posts (6). Several technology tweaks were suggested, including expanding the character limit (5) enabling editing of posts (2) and threading of topics with the addition of a "reply" function (2).

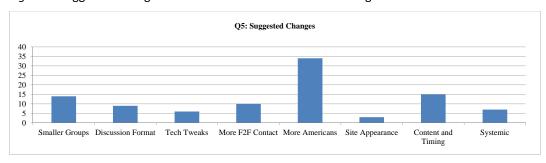


Figure 5. Suggested changes to future use of web-blended learning at this institution.

A minority of students suggested more face-to-face contact (10), though not necessarily at the expense of online interactions. Some these included the incorporation of more face-to-face discussion via Skype with American professors and students, in particular as a way to practice and improve oral language skills. It was also suggested that this class would have more relevance and impact if it were scheduled after field practice rather than before (2). Several content changes were requested (10), including more online lectures, lectures that were "more informal," and more cross-cultural topics with more focus on U.S. universities and "activism." One student requested training in time management. The last block of suggestions transcend the scope of this course to general application of web-blended experience in other contexts and recommended changes in the program of study at VSPU.



RECOMMENDATIONS

Student feedback from this pilot study was very encouraging regarding the popularity and potential for webblended learning. Positive comments outweighed negative ones by nearly two to one (I.85:1). Some of the feedback from students provided surprisingly insightful guidance on improvements to the basic structure. We concur that it would be productive to adjust group size for forum discussions to reduce message load and establish rubrics to improve quality and professionalism in message posting. Increasing character count, improving uploading protocols, and the incorporation of message threading, would make forums more user-friendly and flexible. However, major changes to class infrastructure would require a commitment to a more robust delivery system. Many freeware options, such as Moodle, are commonly available in Ukraine, but any move to a larger-scale learning management system would require an institutional commitment to maintain a dedicated technical support staff.

The students highlighted inconsistencies in quality of forum prompts, both in their feedback and in practice. Because they were allowed to choose which forum prompts to address, they responded to those that interested them and largely ignored some others. This "natural selection" pressure had the fortuitous effect of highlighting and effectively eliminating several questions that were generally ineffective for open forum discussion because they were too closed-ended. Forum prompts must be carefully crafted to make them open-ended and engaging.

Traditional academic culture at VSPU is very teacher directed, relying heavily on formal lectures and close instructor supervision. The web-blended format allowed a (perhaps false) illusion of independence, which was not always conducive to self-discipline and responsibility. Time management and motivation became serious issues for a few students. It would be worthwhile to invest some time and attention to training students and faculty in time management strategies to improve efficiency and self-discipline in online work. Students should also be trained and encouraged to use the connectivity of the Internet to illustrate, footnote, and otherwise enrich their discussion responses; it is not "cheating" to use hypertext and creative web references to create more authoritative responses.

We are very grateful to our American partners for their time in helping to develop this course and to volunteer their time as guest lecturers and discussion moderators. While we recognize the undoubted value of increasing the number and frequency of such interactions, there are many practical limitations that make that difficult. None the less, it would be valuable to find and utilize every opportunity to foster cross-cultural communication between our countries and educational systems.

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