INTEGRATION OF WEB 2.0 TECHNOLOGIES INTO FOREIGN LANGUAGE CLASSROOM AT HIGHER EDUCATIONAL INSTITUTIONS

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Abstract. The paper reports the results of an exploratory qualitative and quantitative study investigating the potential of Web 2.0 technologies as learning tools for the development of learners' foreign language skills. In particular, the research is devoted to foreign language communicative competence since it is considered a necessary skill for the further development of university students both at higher educational institution and in their careers. The study suggests that the connectivist practice via Web 2.0 tools provides any significant effect on improving learners' foreign language communicative skills. This research involved a total of 16 students, doing their BA in Karaganda Buketov University, 8 of them used various Web 2.0 services, and the other 8 in a control group followed the same curriculum, but without web applications for 14 weeks. Questionnaires were used to investigate learners' perceptions of the task value and of their performance and confidence changes over time. Pre- and post-productive tests were used to compare the participants' language productions before/after the project. The results of the analysis revealed the outperformance of the experimental group over the control one and allowed to recognize learners' positive attitudes towards the use of Web 2.0 tools. Thus, the study confirms the effectiveness of the introduction of Web 2.0 technologies in teaching a foreign language to improve students' language skills.

Keywords: Web 2.0 tools, foreign language classroom, ICT, technology-based teaching, MALL (Mobile Assisted Language Learning), language skills, communicative competence, 21st century skills

Basic provisions

The COVID-19 epidemic had a significant impact on the field of education around the globe, including Kazakhstan. The requirement to transition from traditional education to e-learning, as highlighted by UNESCO (2020), has compelled Foreign Language instructors to modify their approach by utilizing suitable video conferencing platforms. This adaptation is necessary to facilitate authentic communication, such as negotiations and discussions with fellow learners [1], and to enhance the speaking abilities of foreign language learners [2]. The integration of MALL (Mobile Assisted Language Learning) devices as smartphones into foreign language curriculum of higher education institutions has become the norm due to numerous advantages regarding the digital and media skills of both students and teaching staff formation [3].

More and more English language teachers are over-adopting the internet and other ICT products, not only to help them in teaching, but also to achieve learning goals and outcomes [4-5]. A new era of the Internet world known as Web 2.0 has

come, which is believed to add value to foreign language education.

With the growth of global learning skills in the 21st century and the introduction of technology and mobile applications as part of a standards-based curriculum, a surplus of free applications aimed at developing fluency in the language has been at the forefront of education. In addition, the implementation of technology has been incorporated into the curriculum and is required in classrooms across the country to develop the need for global learning skills. That is why it is critical to integrate such applications into higher education in Kazakhstan today. As a result, the study emphasizes the positive impact of implementing Web 2.0 technologies in the foreign language classroom for university students, and it is suggested that using such tools provides an equal opportunity for all learners to develop language skills.

Introduction

Web 2.0 is highly popular with the youth, therefore teachers, tutors, lecturers, researchers and students have begun to use it for educational purposes [6-9]. Web 2.0 can also facilitate collaboration among students and provide a set of tools for teachers to support learning styles, stimulate intelligence, increase students' confidence and anchor their learning foundations. The selection of appropriate content from the wide range of Web 2.0 tools, as well as their integration into English teaching methodology, pose the biggest challenges. Web 2.0 tools have the potential to systematize information, improve the educational process, organize students' independent work, modernize assessment forms, and boost student motivation.

Researchers Wen-Hao, H. Denice, Y. Sun determined that Web 2.0 tools have a potential impact on motivation in learning and improving student performance [10]. Supporting this point of view, Z. Dörnyei writes that motivation is the key to the success of students' education [11]. If there is no motivation, learners are unable to achieve long-term goals in their studies. Therefore, it can be stated that motivation is essential in academic contexts. Web 2.0 technologies influence the motivation of learners and their attitude to learning a foreign language and contribute to the gradual mastery of a high level of language. It is important to determine which Web 2.0 tools are most effective in keeping students motivated to become an advanced user of a foreign language. To achieve this question, Web 2.0 tools were analyzed, and their effectiveness in the teaching-learning process was revealed.

It is important to select those means, the purpose of which is related to the actual problem of teaching foreign languages - the formation of foreign language communicative competence of students, taking into account the Common European Framework of Reference for Languages (CEFR) and standards for the use of technologies in the study/teaching of English as a foreign language (TESOL Technology Standards).

The purpose of this study is to implement Web 2.0 services to determine their impact on the development of language skills in university students. Research focuses specifically on foreign language communicative skills. This is because it is considered a necessary skill for the further development of students both in their

studies and in their professional life. English is considered an international language and is spoken all over the world, so English is used to communicate with people living in different regions, states, countries and continents around the world. Kazakhstani students are good at grammar [12], but find it difficult to speak English in real communication. The lack of opportunities to practice English in the classroom is offset by listening problems and feedback on speaking assignments.

Methods and materials

The paper reports the results of a mixed-method approach: a qualitative and quantitative pilot study examining the effectiveness of Web 2.0 technologies usage in foreign language teaching. The current study employs a questionnaire to obtain quantitative data from student respondents using a 5-point Likert scale (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree) to rate participants' self-evaluation of Web 2.0 tools.

The study used 16 second-year students of foreign languages faculty of Buketov Karaganda University. Eight students of the control group were trained according to the traditional methodology, while the other eight students of the experimental group were trained using a set of Web 2.0 tools as follows:

    a) Expected learning outcomes based on Bloom's taxonomy were presented in the study units.

    b) Careful selection of Web 2.0 tools to develop students' language skills and enlarge vocabulary range was conducted (some of them are given in the Table 1).

Table 1 - Web 2.0 tools implemented in the classroom

Tool	Website	Function
WeVideo	https://www.wevideo.com/	A web-based video editing platform for collaborative work.
Bigbluebutton	https://bigbluebutton.org/	Webinars, video conferences connecting people from different parts of the world online
Voicethread	https://voicethread.com/	A cloud-based interaction application that lets teachers and learners upload presentations in the form of PowerPoint slides, photos, videos, or all three; add voice comments; and securely share the presentation with other learners
Flipgrid	https://info.flip.com/	A video discussion instrument that enables learners to instantly participate in recorded video and audio dialogues, including writing comments.
BBC podcasts	https://www.bbc.com/learningenglish/english/podcasts	Podcasts help develop learners' listening, oral and communication skills by listening to native speakers discussing events and studying how they use language and tone to communicate.
Storybird	https://storybird.com/	A web application that is used to create visual stories individually or collectively and published online.
Google Sites	https://sites.google.com	A convenient web platform for creating wiki sites
Wordpress	https://wordpress.com/	A platform for self-publishing that is popular for blogging and other works.
Edpuzzle	https://edpuzzle.com/	A platform for creating quizzes and interactive

		video tutorials.
WebSequitur	https://www.cict.co.uk/text oys/sequitur.php	Working with a text broken into segments.
Dotsub	https://dotsub.com/	Online video captioning and translation.
Padlet	https://padlet.com/	A free tool used to create an online bulletin board.

    c)   A tutorial on how to use these tools in the classroom was provided to students in the experimental group. Puentedura's SAMR model [13] helped to find out whether the chosen Web 2.0 tools were suitable for the learning objectives.

    d)   A convenient website constructed in Google sites was used for embedding all the content and assignments.

The experimental training lasted 14 weeks; 2 hours for each group. A pre-test and a post-test were taken using British Council English Score app which helped to check core skills: grammar, vocabulary, reading, listening and speaking.

Results and discussions

Before the research commenced, students of both groups were asked to participate in the pre-test using British Council EnglishScore app. The participants were graded according to the EnglishScore point-based scale. The point "0" means the lowest point, whereas the "599" point is considered the highest point, from Pre A1 to C1 respectively [14].

Normality of parameter distribution was assessed by *Shapiro-Wilk tests.* This criterion was chosen for checking for normality because it has the greatest power. Since n≤50 we used the Shapiro-Wilk tables to calculate the p-value. The Shapiro-Wilk tests did not show a significance departure from the normality, $W(16) = 0.906$, $p = 0.099$ *Shapiro-Wilk test* revealed normal distribution of the data (Table 2). Since p-value $> \alpha$, we accept the H_0. That is, there is no statistically significant difference between the data sample and the normal distribution. A nonsignificant result does not prove that H_0 is correct and only proves that the null assumption cannot be rejected.

Table 2 - Normality of distribution data

Parameter	Value
P-value	0.09858
W	0.9055
Sample size (n)	16
Average (x̄)	296.375
Median	293.5
Sample Standard Deviation (S)	58.1273
Sum of Squares	50681.75
b	214.2279
Skewness	-0.0705
Skewness Shape	Potentially Symmetrical (pval=0.901)
Excess kurtosis	-1.3759
Kurtosis Shape	Potentially Mesokurtic, normal like tails

The pre-test and post-test performances of both groups were statistically assessed using independent sample t-tests. A comprehensive analysis is presented in the Table 3.

Table 3 - Pre-test results for both groups

Summary

	Group 1	Group 2
Mean	291.375	286.875
Variance	2602.9844	4178.8594
Stand. Dev.	51.0195	64.6441
n	8	8
t	0.1546	
d.o.f	13	
critical value	1.771	
t < critical value	=>	no sig. diff.

The findings from the pre-test scores in Table 1 show that there is no discernible split in the means of the groups at $p < 0.05$.

The post-test performances of the control and experimental groups were also examined using independent-samples t-test statistical methods. The progress on the post-test was compared (Table 4).

Table 4 - Post-test results for both groups

Summary

	Group 1	Group 2
Mean	310.75	466.5
Variance	3710.9375	2868
Stand. Dev.	60.9175	53.5537
n	8	8
t	-5.4312	
d.o.f	14	
critical value	1.761	
| t | > critical value	=>	there is sig. diff.

As demonstrated in the Table 3, the post-test mean score of the experimental group (466.5) is greater than that of the control group (310.75). By the end of the study, the mean score on the post-test for both groups indicated that all participants demonstrated some improvement. However, a t-Test was conducted to determine whether the differences in the mean scores were statistically significant. The absolute value of the calculated t exceeds the critical value (5.4312>1.761), so the means are significantly different.

The data and statistical analysis reveal the effectiveness of implementing Web 2.0 technologies in the foreign language classroom.

The qualitative approach was conducted through the questionnaire for the experimental group students at the end of the course. The questionnaire aimed to

determine students' insights into the implementation of Web 2.0 services. The findings are summarized in the table below (Table 5).

Table 5 - Results of the Questionnaire

Items No	Question items	Mean
1	Web-based language learning is the need of the hour and future	4,5
2	Web-based language learning is easy to use and makes learning interesting	4,3
3	To take web-based language learning courses was challenging.	3,9
4	Web-based language learning creates a more diverse and collaborative environment for boosting communicative skills.	4,6
5	Web 2.0 tools motivate learners towards language learning.	4,5
6	Web-based language learning enables learners to use oral and written statements appropriately to perform various communicative functions.	4,6
7	Web-based language learning develops the ability to express different shades of opinions in English in relation to a certain situation.	4,5
8	Web-based language learning courses improved my four language skills: reading, writing, listening, and speaking.	4,75
9	Most services and apps enable learners to improve pronunciation.	4,5
10	Most services and apps help to memorize English words, review them every day, and enrich my vocabulary range.	4,75
11	Most services and apps help to overcome language barriers.	4,6
12	Web-based language learning offers a good variety of English learning materials.	4,5
13	Web-based language learning helps me interact and collaborate with my peers and the broader audience.	4,5
14	I hope teachers integrate more Web 2.0 tools into English language classrooms.	4,6

Table 5 shows that the students are very positive about using Web 2.0 tools in the foreign language classroom, which was addressed by the mean scores ranging from 3,9 to 4,75. Many students' responses reported that Web 2.0 services were easy and made learning interesting (M = 4,3). Moreover, there were other findings that addressed positive perceptions of students on the effectiveness of Web 2.0 tools on language learning including enhancing interaction (M = 4,6), providing more convenience to overcome language barriers (M = 4,6), creating more speaking and writing opportunities (M = 4,6), and promoting motivation in learning speaking (M = 4,5). As a result of the conducted study, second-year students appeared to take their language skills to the next level and enrich the vocabulary (M = 4,75). They wish teachers integrated more Web 2.0 technologies into foreign language teaching (M = 4,6).

The survey included one open-ended question on difficulties students faced while using Web 2.0 technologies in the English classroom, to which the majority (6 students out of 8) answered 'no difficulties', and only 25% (2 out of 8) mentioned some problems with the Internet connection.

The results showed positive feelings towards the help of various Web 2.0 tools in terms of engaging learners in learning opportunities in class and creating more collaboration, which was seen through all the high means of each item.

According to all indicators, positive dynamics of the formation and progress of productive skills have been recorded. This study suggests that Web 2.0 technologies, with their interactive and participatory qualities, can be effectively exploited to increase learners' language skills, especially communicative competence including all its components.

This study showed that students have significantly enhanced their language skills, communicative competence and vocabulary through the use of Web 2.0 tools, rather than traditional teaching methods. Web 2.0 tools have many linguodidactic peculiarities and functions that offer learners and teachers great opportunities for such qualitative improvement. They allow learners to practice a number of skills both within and outside of the classroom. The tools motivated learners to watch audio-video/recordings and do interactive listening exercises in each unit.

Using these tools has also improved learners writing skills. This is reflected in their participation in classroom forums and research results. Web 2.0 tools also encourage learners to socialize and chat with their groupmates. Students used Voicethread, Flipgrid apps to record their speeches on specific topics and share them with the group.

The tools also helped students with their reading comprehension and vocabulary. And with WebSequitur, learners could do different reading tasks by reconstructing a text.

Web 2.0 tools are also creating competition among learners. They were able to be more imaginative in their assignments, as evidenced by the digital storytelling projects they created.

Students recognized the potential of Web 2.0 in learning English, focusing on the acquisition of vocabulary and the development of language skills. This was mainly due to the expansion of communication opportunities in English beyond the physical walls of the classroom.

Conclusion

The necessity and simplicity of using Web 2.0 technologies in education should be noted, which highlight their significance with the major components: web-based work organization and learners' enthusiasm to study the university discipline. The implementation of Web 2.0 technologies will enrich the content of the foreign language classroom and contribute to the transition from the model of activating learning to the model of open active education.

Web 2.0 promotes learner-centred language and knowledge acquisition, while facilitating interaction between content, peers and instructors. A teacher creates the course design and ensures a high level of interactivity and engagement through carefully designed learning tasks. In this way, teachers and learners become partners in the construction of knowledge by creating and evaluating authentic products. Such fascinating and authentic learning tasks can empower learners, since learning is socially constructed through interaction with other people and is expressed in a personal interpretation of knowledge. Creativity, critical thinking and academic performance are promoted by ways that motivate learners.

Web 2.0 tools provided an equitable opportunity for English language learners

to develop their language skill set while also taking their interaction and collaboration with the peers and the broader audience to the next level. This development came about as a result of an increase in the development of learning skills appropriate for the twenty-first century.

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WEB 2.0 ТЕХНОЛОГИЯЛАРЫН ЖОҒАРЫ ОҚУ ОРЫНДАРЫНДАҒЫ ШЕТЕЛ ТІЛІ САБАҚТАРЫНА ИНТЕГРАЦИЯЛАУ

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Аннотация. Мақалада Web 2.0 технологияларының әлеуетін студенттердің шетел тілін меңгеру дағдыларын дамыту үшін оқыту құралы ретінде қарастыратын сапалы және сандық зерттеу нәтижелері келтірілген. Атап айтқанда, зерттеу шет тілдік коммуникативті құзыреттілікке бағытталған, себебі бұл университетте де, олардың мансабында да студенттерді одан әрі дамыту үшін қажетті дағды болып саналады. Зерттеу Web 2.0 құралдарымен коннективизм тәжірибесі оқушылардың шет тіліндегі қарым-қатынас дағдыларын жақсартуға айтарлықтай әсер ететінін болжайды. Зерттеуге Е. А. Бөкетов атындағы Қарағанды университетінде бакалавр дәрежесінде оқып жатқан 16 студент қатысты. 14 апта бойы 8 студент сабақ барысында әртүрлі Web 2.0 құралдарын пайдаланды, ал бақылау тобындағы 8 студент дәстүрлі оқыту әдістерімен оқытылды. Студенттердің инновацияны қабылдауын, сондай-ақ уақыт өте келе олардың үлгерімі мен сенімділігінің өзгеруін зерттеу үшін сауалнамалар пайдаланылды. Жоба қатысушыларының тілдік жетістіктерін салыстыру үшін пре/пост-тесттер қолданылды. Қорытынды тестінің нәтижелері эксперименттік топтың пайдасына тілдік дағдылар мен сөздік қор деңгейі бойынша екі топтың арасында айтарлықтай статистикалық айырмашылық бар екенін көрсетті және студенттердің Web 2.0 құралдарын қолдануға деген оң көзқарасын анықтады. Осылайша, зерттеу студенттердің тілдік дағдыларын жақсарту үшін шетел тілін оқытуда Web 2.0 технологияларын енгізудің тиімділігін растайды.

Тірек сөздер: Web 2.0 құралдары, шетел тілі сабағы, АКТ, технологияға негізделген оқыту, MALL (мобильді құрал көмегімен тіл оқыту), тіл дағдылары, коммуникативті құзырет, 21 ғасыр дағдылары

ИНТЕГРАЦИЯ ТЕХНОЛОГИЙ WEB 2.0 НА УРОКАХ ИНОСТРАННОГО ЯЗЫКА В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ

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Аннотация. В статье представлены результаты качественного и количественного исследования возможностей технологий Web 2.0 в качестве инструментов, помогающих обучающимся лучше владеть иностранным языком. В частности, исследование посвящено иноязычной коммуникативной компетенции, поскольку это считается необходимым навыком для дальнейшего развития студентов как в высшем учебном заведении, так и в карьере. Согласно исследованию, практика коннективизма с помощью инструментов Web 2.0 оказывает значительное влияние на улучшение иноязычных коммуникативных навыков студентов. В этом исследовании приняли участие 16 студентов Карагандинского университета имени академика Е.А. Букетова; 8 из них использовали различные веб-сервисы, а остальные 8 студентов в контрольной группе изучали ту же учебную программу, но без веб-приложений в течение 14 недель. Пред- и пост-продуктивные тесты были использованы для сравнения языковых навыков участников до и после проекта. Результаты анализа показали, что экспериментальная группа демонстрировала положительную

динамику в развитии иноязычной коммуникативной компетенции по сравнению с контрольной группой. Также было выявлено хорошее отношение обучающихся к использованию технологий на уроках иностранного языка. Таким образом, это исследование подтверждает эффективность использования технологий Web 2.0 в преподавании иностранных языков для улучшения языковых навыков обучающихся.