Kismetova Galiya, Agniyazova Assem

M.Utemisov West Kazakhstan University, Uralsk, Kazakhstan

E-mail: galiya-1969@mail.ru, assemagniyazova@gmail.com

INTEGRATION OF THE WORDWALL SERVICE INTO THE EDUCATIONAL PROCESS: WAYS TO IMPROVE STUDENTS' GRAMMAR, VOCABULARY AND ORAL SPEECH

Annotation. Digital platforms have become firmly embedded in **school №7** practice, yet rigorous comparative evidence on their impact on adolescents' language outcomes remains limited. This article presents a quasi-experimental study examining the effects of short interactive Wordwall micro-sessions on eighth-grade students' mastery of grammar and vocabulary and the development of speaking skills. Fifty students (experimental group, EG = 25; control group, CG = 25) participated over eight weeks; both groups followed the same syllabus, while the experimental group systematically used Wordwall activities 3 times, 8–12 minutes per week. Assessment included pre-, post-, and delayed (retention) tests; speaking was rated using the CAF rubric (complexity, accuracy, fluency). By median Post–Pre gains, the experimental group outperformed the control: grammar—gain of +14 points (Post–Pre) versus +9 (out of 100); vocabulary— gain of +9 (out of 40) versus +6; speaking—gain of +5.0 (out of 30) versus +3.5. The share of students who surpassed the predefined thresholds of meaningful progress was also higher in the EG (grammar 76% vs. 40%; vocabulary 72% vs. 44%; speaking 64% vs. 36%). The paper discusses mechanisms of action (retrieval practice, gamification, ICAP), design limitations, and practical recommendations for integrating Wordwall into lessons.

Keywords: Wordwall; digital pedagogy; retrieval practice; gamification; quasi-experiment; learning gains; delayed retention; feedback; CAF rubric; speaking skills; spaced practice; EFL context; motivation; student engagement.

Introduction

The rapid development of digital technologies has significantly changed the way students learn languages, making interactive tools such as Wordwall an essential part of the modern classroom. According to Nurbekova Zh. et al, the adaptation of higher and postgraduate education to the needs of the digital era is essential, with technology serving as a tool to support student-centered approaches without diminishing the teacher's pivotal role [1]. In recent years, interactive micro-tasks have taken a firm place in language education because they enable frequent, short cycles of «question → answer → immediate feedback», in which well-established learning mechanisms—retrieval practice

(testing effect), spaced practice, desirable difficulties, formative feedback, and gamification—work together; in this format, the **Wordwall** platform is useful not as a «toy», but as a carrier of these approaches as ready-made templates, rapid checking, printable versions, and therefore integrates well into lessons targeting grammar, vocabulary, and speaking [2]. As D.E. Sheriyazdanova highlights, Wordwall is an interactive platform for creating quizzes, matching games, and board games that activate prior knowledge, develop vocabulary, and enhance grammar skills [3]. **Building on this idea,** Bolatbek S., Aliakbarova A.T., and Tankibayeva M.Kh. note that the majority of studies on the use of mobile technologies in education are mainly theoretical in nature, emphasizing their didactic features, classifications, and theoretical justification for their use in various learning contexts, as well as describing successful examples of integrating mobile applications into the educational process [4]. **In my research, I focus on the practical implementation of these technologies, demonstrating how Wordwall can effectively improve students' grammar, vocabulary, and speaking skills through interactive and engaging learning activities.** A large body of research on **retrieval practice** shows that practice tests reliably outperform rereading and other study modes for long-term memory and even support transfer to novel tasks, which Wordwall can easily approximate through quizzes, typed-response items, and matching activities [5]. The benefit of **spaced practice** is confirmed in meta-analytic and experimental work, which suggests scheduling short Wordwall sessions that revisit the same targets [6].

The notion of desirable difficulties explains why tasks that require generation, variation of conditions, and the use of mild time constraints make learning more durable and transferable. **According to Shute V. J.,** syntheses on formative feedback show that elaborated feedback — including explanations and cues — is more effective than simple right/wrong signals, and in a digital environment like Wordwall, such feedback can be embedded directly into tasks to provide learners with immediate and meaningful guidance [7].

Regarding **gamification**, meta-analytic evidence indicates small-to-moderate but robust effects on cognitive, motivational, and behavioral outcomes, with recent reviews confirming benefits in EFL/ESL contexts—so game elements function as an «amplifier» of regular practice rather than a goal in themselves [8]. For **speaking assessment**, we adopt the **CAF** framework (Complexity–Accuracy–Fluency), elaborated in work by Housen, Kuiken, Vedder and further linked to functional adequacy in newer studies, which provides transparent metrics for short post-Wordwall monologues [9]. Finally, empirical studies specifically on **Wordwall** are accumulating: quasi-experiments and surveys report vocabulary gains and positive learner attitudes toward regular micro-activities, albeit with varying study quality—patterns that align with the broader literatures on practice testing and gamified learning. Taken together, this defines the theoretical frame of the present work: we treat Wordwall as an **operational container** for high-evidence mechanisms and, in what follows, show how to connect work on form (grammar), expansion of meaning (lexis), and transition to productive speaking, accompanied by transparent metrics of gain and retention.

Research Questions:

1. Do Wordwall micro-sessions produce larger Post–Pre gains in grammar and vocabulary than traditional practice?

2. Does the share of students who cross predefined thresholds of meaningful progress increase?

3. Is the effect sustained at delayed testing?

Materials and Methods of research

We conducted the experiment at **School №7 in Uralsk** with **8th-grade** classes: two intact parallel classes of **25 students each**. The design was quasi-experimental with two parallel groups: **Control** and **Wordwall**. Both groups studied the same module with the same teacher, equal lesson time, and identical homework load; the only difference was the practice format. The Control group used familiar paper-based and oral exercises without the platform, whereas the Wordwall group completed **8–12-minute micro-sessions** on the platform three times per week (quizzes, typed response, matching, random wheel) with **immediate elaborated feedback** and light gamified elements. The instructional cycle lasted **4 weeks**, followed by a **delayed check** two weeks later.

Measurement points and instruments

Testing was conducted at three points: Pre (before instruction), Post (immediately after the instructional phase), and Retention (two weeks after Post). Vocabulary was assessed with a thematic test combining recognition, recall, and collocation tasks (maximum 40 points). Grammar was measured with productive tasks - sentence transformations and open gap-fill (maximum 100 points). Speaking was elicited by a 60–120 second monologue based on a visual prompt and rated with an analytic CAF rubric (complexity, accuracy, fluency; maximum 30 points). Two trained raters scored speaking independently; if their totals differed by more than 2 points (out of 30), a brief calibration on anchor samples was performed and the responses were rescored. Parallel Pre/Post/Retention forms, prepared in advance and equated for difficulty through piloting and expert review, were used.

Table 1 – Comprehensive Rubric for Assessing Students' Performance and Engagement

Criteria	Excellent (90-100)	Good (75-89)	Satisfactory (50-74)	Needs Improvement (less than 50)
Participation and Engagement	Actively engages throughout the lesson; contributes ideas, asks questions, and supports classroom discussions.	Participates regularly and responds when prompted; demonstrates clear interest in learning.	Participates occasionally; needs encouragement to stay involved.	Rarely participates or shows interest; remains disengaged during lessons.

Group and Pair Collaboration	Works productively with peers; demonstrates leadership, cooperation, and respect for others' ideas.	Collaborates effectively; completes shared tasks responsibly.	Participates in group work when instructed; limited interaction with peers.	Avoids collaboration; struggles to cooperate or complete group tasks.
Task Completion and Accuracy	Completes all assignments on time with high accuracy and attention to detail; work often exceeds expectations.	Completes most assignments with acceptable accuracy; minor errors or delays.	Completes some tasks; frequent errors or partial submissions.	Rarely completes assignments; quality and accuracy are consistently poor.
Language and Communication Skills	Communicates ideas clearly and fluently; uses accurate grammar and rich vocabulary.	Expresses ideas coherently with minor errors; vocabulary is adequate.	Communicates meaning with noticeable errors; limited vocabulary or structure.	Has difficulty expressing ideas; frequent grammatical mistakes hinder understanding.
Self-Motivation and Independence	Consistently demonstrates initiative, curiosity, and responsibility for own learning.	Usually motivated and independent; needs minimal guidance.	Motivation fluctuates; requires teacher reminders or support.	Lacks initiative; depends entirely on teacher direction.

Week-by-week procedure.

Week 1. Diagnostics + 2–3 templates for each objective. Focus on the weakest area.

Week 2. Retrieval sessions (Mon/Wed/Fri, 8–12 minutes) + one timed mini-monologue.

Week 3. More productive input (typed response), collocation tasks; expand speaking practice and peer assessment.

Week 4. Mixed-format checkpoint (Quiz) + pair/group mini-projects; collect analytics.

Success metrics: % correct in quizzes; gain on the target wordlist ($\geq$ +20%); improvement on the speaking rubric ($\geq$ +3 points out of 30 over four weeks); share of students at levels 3–4 on the vocabulary-mastery scale.

Results

Short Wordwall micro-sessions produced bigger and more durable gains than the regular routine. You can see this from three simple signals: more students crossed a pre-declared improvement bar, the typical (median) gain was larger, and more learners stayed "green" two weeks later.

The conducted experiment clearly demonstrated that the integration of Wordwall micro-sessions into the learning process had a significant positive impact on students' progress in grammar, vocabulary, and speaking. Despite both groups following the same syllabus and spending an equal amount of instructional time, the experimental group achieved notably better results at every stage of assessment.

At the pre-experiment stage, both groups started from comparable levels, which ensured the reliability of the results obtained. However, after four weeks of instruction, distinct differences became visible.

Quantitative Results

The proportion of students who demonstrated meaningful progress was considerably higher in the experimental group. In grammar, 76% of students in the Wordwall group reached the improvement threshold, compared to only 40% in the control group. For vocabulary, the figures were 72% versus 44%, and for speaking — 64% versus 36%. This means that with identical lesson time and materials, from 20 to 36 percent more students achieved notable improvement when digital tools were integrated into the learning process.
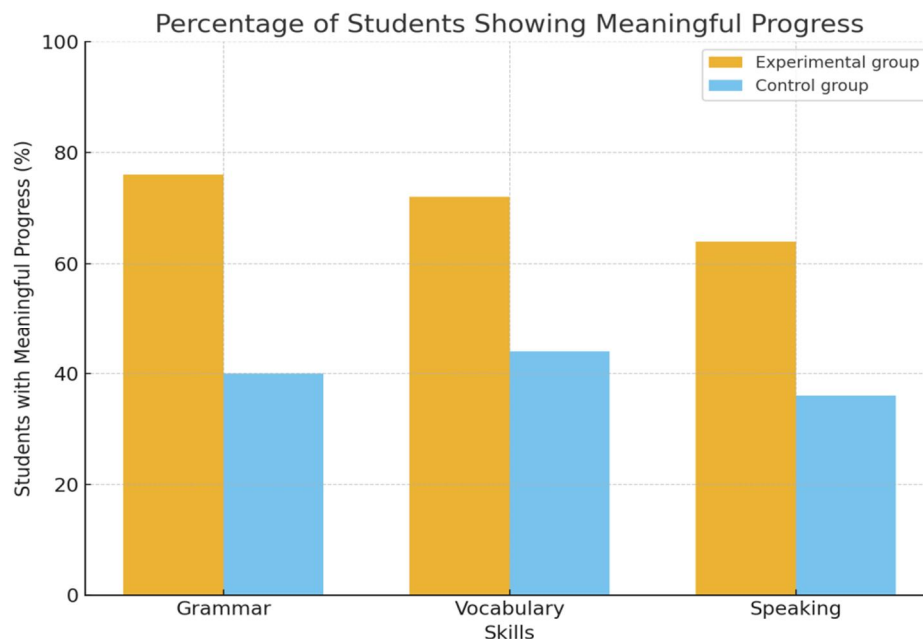
Figs 1 - Percentage of Students Showing Meaningful Progress

The median Post–Pre gains clearly demonstrate the advantage of the experimental group.

Students who participated in Wordwall-based lessons showed a stronger and more consistent improvement across all skill areas. Their grammar scores increased by an

average of 14 points out of 100, compared to 9 points in the control group, indicating a more confident use of grammatical structures. In vocabulary, the experimental group improved by 9 points out of 40, while the control group achieved only 6, reflecting a broader and more stable lexical repertoire. As for speaking, the difference was also evident: +5.0 points versus +3.5, meaning that learners in the Wordwall group developed greater fluency, accuracy, and confidence in oral performance. These results indicate that the average learner in the experimental group progressed further across all assessed skills.

Two weeks later, at the retention stage, the Wordwall group showed more stable results and less performance decline. Vocabulary scores decreased by only −0.9 compared to −1.7 in the control group; grammar — by −1.1 compared to −2.6; and speaking — by −0.3 compared to −1.0. This suggests that the integration of interactive tools contributes to longer-lasting retention of knowledge and skills.

Discussion

The obtained data fully confirm the hypothesis of the study: short, interactive Wordwall micro-sessions lead to higher learning outcomes and better retention than traditional methods. The success of the experimental group can be explained by several key mechanisms: **retrieval practice**, **spaced repetition**, and **elaborated feedback**, all of which are naturally embedded in the Wordwall platform.

The use of short, gamified tasks three times a week allowed students to review material regularly, receive instant feedback, and correct their mistakes in real time. This approach not only improved academic performance but also increased learners' motivation, concentration, and confidence in using the language.

Pedagogical Implications

These findings have direct implications for classroom practice. Incorporating brief Wordwall activities does not require additional lesson time, yet significantly improves the efficiency of instruction. The combination of digital and traditional methods creates a dynamic, student-centered learning environment where engagement, motivation, and progress mutually reinforce each other.

In general, the results of this experiment show that digital technologies can serve not as a substitute for traditional teaching, but as an effective complement that strengthens the learning process and helps students achieve more sustainable and meaningful progress.

What this means for practice. Keeping the same topics and lesson time, adding 8–12-minute Wordwall micro-sessions three times a week with immediate, explanatory feedback and a short productive output leads to more students crossing the bar, larger typical gains, and better retention.

Limitations, Validity Threats, and Quality Assurance

The present classroom trial is quasi-experimental, which means baseline equivalence cannot be guaranteed; even when initial means and medians look comparable by eye, residual selection effects may remain. Teacher effects can also confound outcomes, because the same instructor might unconsciously channel more energy into one routine; standardizing lesson time and using identical targets mitigates, but does not eliminate, this risk. Instrumentation threats are possible if post or retention tasks are easier than pre, so parallel forms must be genuinely equivalent in difficulty and coverage.

Testing and novelty effects can inflate early gains, especially with a new platform; spacing the practice over four weeks and including a delayed check reduces, but does not erase, this concern. Regression to the mean can exaggerate improvements for lower starters; the pairwise "who wins more often" readout, matched by pre-level, helps counter that interpretation. Rater variability in speaking persists despite calibration; using two raters and revisiting disagreements that exceed two points on the 30-point rubric narrows the band but cannot make it vanish. Missingness is another threat: if absent students cluster in one group or at one timepoint, comparisons skew; explicitly marking missing data and avoiding imputation guesses preserves integrity even when it lowers sample size.

Conclusion

In practical terms, Wordwall functions as an operational container for high-evidence mechanisms-retrieval practice, spacing, and elaborated feedback-delivered in brief, low-stakes cycles that are easy to sustain week after week. Under a deliberately simple analytic lens, three signals converge across vocabulary, grammar, and speaking: more learners cross a pre-declared improvement bar, the typical learner's gain (median) is larger, and more students stay "green" at delay. The pairwise "who wins more often" check, matched by pre-level, adds an intuitively persuasive layer without statistical jargon. Because the method relies on thresholds, medians, retention categories, pairwise tallies, and dot-plot visuals, any teacher can run it with a spreadsheet and a one-page tracker, turning progress monitoring into a routine habit rather than a specialized analysis. The implication is straightforward: keep the micro-dose tight, keep the cadence steady, embed explanations in feedback, and always end with a small piece of production tied to CAF. Replicating the same routine across two or three consecutive modules will show whether the advantage stabilizes—at which point the "who crossed the bar, who held the gain, and what we recycle next" conversation becomes a durable feature of the course rather than an isolated experiment.

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Кисметова Г.Н., Агниязова А. Қ.

WORDWALL СЕРВИСІН БІЛІМ БЕРУ ПРОЦЕСІНЕ ИНТЕГРАЦИЯЛАУ: ОҚУШЫЛАРДЫҢ ГРАММАТИКА, ЛЕКСИКА ЖӘНЕ АУЫЗША СӨЙЛЕУ ДАҒДЫЛАРЫН ЖЕТІЛДІРУ ЖОЛДАРЫ

Аңдатпа. Цифрлық платформалар №7 мектептің тәжірибесіне берік енгенімен, олардың жасөспірімдердің тілдік нәтижелеріне әсері туралы салыстырмалы нақты деректер аз. Бұл мақалада сегізінші сынып оқушыларының грамматика мен лексиканы меңгеруі және сөйлеу дағдыларын дамытуына қысқа интерактивті Wordwall микросессияларының әсерін зерттеген квазиэксперимент нәтижелері ұсынылған. Зерттеуге 50 оқушы (эксперименттік топ – 25, бақылау тобы – 25) сегіз апта бойы қатысты. Екі топ та бір бағдарлама бойынша оқыды, бірақ эксперименттік топ Wordwall тапсырмаларын жүйелі түрде аптасына 3 рет, 8–12 минуттан орындады. Бағалау алдын ала, қорытынды және кейінге қалдырылған (ретенция) тесттерден тұрды; ауызша сөйлеу CAF (күрделілік, дәлдік, еркіндік) критерийлері бойынша бағаланды. Post–Pre медиандық өсім бойынша эксперименттік топ бақылау тобынан жоғары нәтиже көрсетті: грамматика — +14 балл (100-ден) қарсы +9; лексика — +9 (40-тан) қарсы +6; сөйлеу — +5,0 (30-дан) қарсы +3,5. Маңызды прогресс көрсеткен оқушылардың үлесі де ЭТ-де жоғары болды (грамматика 76% қарсы 40%; лексика 72% қарсы 44%; сөйлеу 64% қарсы 36%). Мақалада әсер ету тетіктері (retrieval practice, геймификация, ICAP), зерттеу шектеулері және Wordwall платформасын сабақтарға енгізу бойынша практикалық ұсыныстар талқыланады.

Кілт сөздер: Wordwall; цифрлық педагогика; ақпаратты еске түсіру практикасы; геймификация; квазиэксперимент; оқу жетістіктері; кейінге қалдырылған есте сақтау; кері байланыс; CAF рубрикасы; сөйлеу дағдылары; аралық жаттығу; EFL контексі; мотивация; оқушылардың белсенділігі.

Кисметова Г.Н., Агниязова А. Қ.
ИНТЕГРАЦИЯ СЕРВИСА WORDWALL В ОБРАЗОВАТЕЛЬНЫЙ ПРОЦЕСС: ПУТИ ПОВЫШЕНИЯ УРОВНЯ ВЛАДЕНИЯ ГРАММАТИКОЙ, ЛЕКСИКОЙ И УСТНОЙ РЕЧЬЮ УЧАЩИХСЯ

Аннотация. Цифровые платформы прочно вошли в практику школы №7, однако строгие сравнительные данные об их влиянии на языковые результаты подростков остаются ограниченными. В данной статье представлен квазиэксперимент, изучающий влияние коротких интерактивных микросессий Wordwall на овладение грамматикой, лексикой и развитие навыков устной речи у учащихся восьмых классов. В исследовании приняли участие 50 учеников (экспериментальная группа — 25, контрольная — 25) в течение восьми недель. Обе группы обучались по одной программе, но экспериментальная группа систематически использовала упражнения Wordwall 3 раза в неделю по 8–12 минут. Оценивание включало предварительные, итоговые и отсроченные (ретенционные) тесты; устная речь оценивалась по критериям CAF (сложность, точность, беглость). По медианным показателям прироста Post–Pre экспериментальная группа превзошла контрольную: грамматика — +14 баллов против +9 (из 100); лексика — +9 против +6 (из 40); устная речь — +5,0 против +3,5 (из 30). Доля учеников, показавших значимый прогресс, также была выше в ЭГ (грамматика 76% против 40%; лексика 72% против 44%; устная речь 64% против 36%). В статье обсуждаются механизмы воздействия (retrieval practice, геймификация, ICAP), ограничения дизайна и практические рекомендации по интеграции Wordwall в уроки.

Ключевые слова: Wordwall; цифровая педагогика; практика извлечения; геймификация; квазиэксперимент; учебные достижения; отсроченное удержание; обратная связь; рубрика CAF; навыки говорения; распределённая практика; контекст EFL; мотивация; вовлечённость учащихся.