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METHODOLOGICAL PRINCIPLES OF IMPLEMENTING MICROLEARNING IN ENGLISH LANGUAGE TEACHING

Annotation. The article reviews the methodological base of applying microlearning in the teaching of English. The paper explores the theoretical background of microlearning (including learner autonomy, customization and cognitive load) in relation to contemporary digital education. Particular attention is also paid to the Kazakhstani educational context, where “Digital Kazakhstan” is a national programme to integrate creative technologies with learning processes. The analysis emphasizes that brief interactive learning units also enhance students’ motivation, facilitate vocabulary recall, and develop active learning. The results of the experiments support that microlearning-based learning content has led to an increase of students’ engagement, autonomy and academic performance in English language learning. By bringing together the principles of both innovative pedagogy and the principles of digital education, microlearning can be considered a valuable method for sustainable advancement of English language teaching in Kazakhstan.

Keywords: microlearning, English language teaching, methodology, mobile learning, digital education, Kazakhstan, interactive learning, personalized instruction.

Introduction

Traditional techniques for learning languages are gradually being replaced by the rapid development of digital technology, enabling the development of new, more effective strategies for learners' personal needs. The most promising and increasingly popular is microlearning. This method uses very short, well-structured learning units, and promotes both quick retention of material and better understanding in the meantime itself. Microlearning guarantees continuous learning, adaptability, high engagement, which is particularly important for today's mobile users whose lives are dominated by mobile devices and knowledge transfer technology.

Microlearning also offers new possibilities in English language teaching to boost learners’ motivation, enhance vocabulary collection and grammar development, and bring digital tools into the classroom. Mobile and online, short interactive lessons make learning much easier and fun for students. Such an approach is beneficial for individual and self-directed learning and places an emphasis on the applicability of knowledge. Kazakhstan’s digitalization of education is a national initiative specified in the “Digital Kazakhstan” plan. Aichanov K. M. and Arenova Zh. K. highlight microlearning as a powerful enhancement to foreign language education because of its flexible and learner-centered format [1,2].

Nevertheless, there needs to be clear methodological guidelines to be established when implementing English language teaching, even with such a method as this. This research aims to investigate the methodological implications of microlearning in the acquisition of English,



in addition to offering a model of integrating the short interactive segment sessions in the educational process.

The research focuses on finding viable practices for microlearning to increase engagement and better understanding in the context of education in Kazakhstan. Microlearning is a contemporary educational concept of providing short, focused learning units that are time-bound in nature. It aids students learn a single subject, or skill so that they can better remember and understand. This approach is consistent with the cognitive load approach, and has been suggested that information must be conveyed in smaller doses that are manageable so they do not overload the learner with too large amounts of information, but rather help them understand the information.

Microlearning helps the active engagement and learner autonomy in English language teaching. Micro-quizzes, vocabulary games, interactive grammar exercises, etc., among other little tasks enable students to learn quickly and keep their motivation. The availability of microlearning wherever and whenever through mobile applications, online platforms, and learning management systems lends support to lifelong learning.

Microlearning is based on pedagogical and psychological principles which consider that learners should be autonomous, personalized and that they should build up new knowledge over short chunks of focused learning. It has roots in the constructivist style, which considers learning as an activity of constructing meaning, not passively receiving new knowledge. Microlearning fundamentally is about small learning-small-scheduled groups that are easily fit into everyday study patterns and are especially applicable to language learning in digital and mobile contexts.

Based on Aichanov K. M., microlearning is believed to enhance cognitive efficiency by lowering the cognitive load of learners and helping them comprehend more [1]. According to Mukhamadiyeva N. R., clear learning objectives, frequent feedback, short learning cycles are crucial methodological features that help maintain learner motivation [5]. These principles align with the central objectives of communicative and learner-centered methods of teaching English.

Aichanov K. M. and Arenova Zh. K. claim that the methodological success of microlearning is due to the teaching-pedagogical complementarity instead of technology newness [1,2]. They argue that short interactive lessons are most efficient when they consist of meaningful, linguistic tasks, facilitate self-reflection, and retain consistency between content and communicative objectives. Therefore, microlearning is not simply a technological trend; rather, it is an organized methodological approach, favoring learner autonomy and collaborative learning.

Moreover, Polatova A. A. mentions that microlearning formats are integral to the teachers' continuous professional development and digital competence formation in digital learning environments [6]. Educators can also up-skill their methodological and technical competencies with micro-modules to make their practice consistent with lifelong learning principles. For students and for those teachers who have to move about in an ever-changing educational environment, this makes microlearning relevant. Methodologically, microlearning can be organised into three critical phases:

6 Pre-learning stage -- activation of prior knowledge and motivation;

7 Micro-content delivery - focused exposure to short-term linguistic inputs, such as through short videos, quizzes, or tasks done on mobile;

8 Post-learning stage - reflection, feedback, and reinforcement through interactive or communicative activities.



As pointed by S. Mukhamadiyeva, adaptive learning technologies can be integrated into these points because individual learning is individualized, and microlearning content is tailored to different cognitive and linguistic levels in student learning [5]. Overall, the methodological principles of microlearning consist of straightforwardness on objectives, brevity of content, interactivity, personalization, and adaptability. These characteristics boost learner motivation, make their autonomy stronger and assist their memory better - so, microlearning is a compelling method to teach English in the contemporary field of education. The next section will demonstrate how these methodological foundations are working and studied in the Kazakhstani educational context. In Kazakhstan, the incorporation of digital and mobile technologies in education is becoming a national priority, which has been visible with the state program “Digital Kazakhstan.” The teaching of English today has become characterised by digital, personalized and learner-driven teaching. Polatova A. A., online communities of practice, provide teaching staff of ‘teacher’-digital skills, and their preparedness to carry out ‘new’ instructional models [6].

Brakhmetova L. T pointed out that integration with digital technologies increases student involvement, individualized learning, and language acquisition in the language learners. They are in accordance with the pedagogical benefits presented by microlearning [3], through which short targeted lessons can sustain motivation and support knowledge retention. It is clear from (4) that Kazakhstani teachers have become better prepared to use digital technologies in the language education. The authors highlight the necessity for systematic methodology structures to facilitate the application of microlearning in the educational process.

Consistent with this, an adaptive learning strategy enables adaptation of instruction to meet students’ needs (Mukhamadiyeva N. R., 2010). All of these results illustrate that a favourable educational context for the introduction of microlearning in English language teaching in Kazakhstan is the combination of nationwide efforts of digitalization of education system and active pedagogical innovations. Together, the research of Kazakhstani academics implies that the educational setting in Kazakhstan is amenable to microlearning-based methods. This is why microlearning in English Language teaching will be well served by national digital initiatives, increasing teacher digital literacies, and a focus on adaptive and learner centred approaches. Hence, the context of Kazakhstan not only mirrors international educational trends, but serves as a base for the construction of locally relevant methodological principles of microlearning.

Materials and methods of research

For the experimental component of the study, we conducted the study by studying the implementation of microlearning practices in an English language teaching based English teaching context on learners of intermediate level. The experiment has been performed to see if the effect of brief, dynamic interactive mobile classes on students’ motivation, engagement, and vocabulary learning can be further compared to the regular format of a traditional learning lesson was positive or negative. The main aim of this study was to assess the pedagogical potential of microlearning lessons in improving English language acquisition. The specific tasks included: Testing students’ motivation before and after the introduction of microlearning;

1. Exploring student motivation pre-intervention and post-intervention to ensure they apply microlearning;
2. Assessing how vocabulary and reading comprehension have improved;
3. Watching students’ participation and self-paced behavior in the classroom.



The participants were 30 8th-grade students from Lyceum School No. 28. Participants were aged 13-14 years. All students showed an A2 level of English spoken proficiency with respect to the Common European Framework of Reference for Languages (CEFR); which is consistent with the CEFR syllabus standards for this grade. Among the reasons why participants were chosen were regular attendance of the English classes, a similar level of prior English language preparation, no further support of private English tutoring while the experiment was under way, and basic digital literacies with accessible mobile device. These criteria guarantee the sample to be as homogeneous as possible and control for irrelevant variables on the researchers' findings.

The experiment lasted four weeks and took place in standard English classes. The participants were assigned via random to a control group (15 students) and an experimental group (15 students). This was implemented in an attempt to minimize the risk of selection bias and achieve equivalence of the outset condition for both groups.

Gender proportions, overall English-level progress and initial language proficiency level in the groups were similar. The two groups were the same teacher (teaching in English) and had similar curriculum content and learning goals. The only difference was instruction: the experimental group received short interactive mobile lessons utilizing microlearning principles and a control group was provided by traditional instructional methods.

A microlearning unit for 5-7 minutes, with an objective of each mini-teaching target language, was conducted with short mobile interactive lessons in the experimental group over 5-7 minutes. The lessons were provided several times per week in the regular lesson of English lessons, and also as assignments in class and at home so that students would be able to participate in and apply the knowledge.

The microlearning material was delivered on mobile-friendly devices (Quizlet or Google Classroom) with diverse interactive activities. As illustrated in one example, one lecture provided brief video sessions introducing the learners to 7-10 new vocabulary items, with an interactive mini-quiz with instant feedback. Another type of task consisted of digital flashcards and gamified multiple-choice tasks focusing on vocabulary and basic grammatical structures. The teacher's role was mainly facilitative and organizational. It was teacher-selected and planned the microlearning content, tracked students learning progress, provided feedback, and clarified hard points when required.

Simultaneously, students were encouraged to work independently, review materials independently and self-Regulate their pace of learning using technology. By contrast, the control group used a conventional lesson routine characterized by standard reading and workbook activities. Author-designed achievement tests were performed to evaluate the effectiveness of microlearning. This assessment was guided through the English curriculum and focused on the learning outcomes and its curriculum content and was completed in pre- and post-test for both groups.

Each test comprised 20 tasks with a focus on vocabulary acquisition and basic reading understanding, consisting of multiple response questions, matching exercises, and short answer question items. Both the control group and the experimental group were subject to the same format for the same type of test to ensure standardization and comparability of results. Responses were evaluated for accuracy, utilization of lexical units, and overall task compliance. Right answer was given 1 point and total score represented the levels of language achievement of learner. Teacher observation was used to gather qualitative information, in addition to quantitative information.



Research results

The results analysis of the research showed that short interactive mobile lessons positively contributed to students English language learning. Data from both quantitative and qualitative aspects showed that the experimental group showed superior performance compared to the control group on various factors. Pre-test analysis established a similar level of English proficiency for the control and experimental group, particularly in vocabulary and reading skills. This illustrates the groups were comparable at the dawn of the experiment and helps to attribute post-test differences to the instruction process.

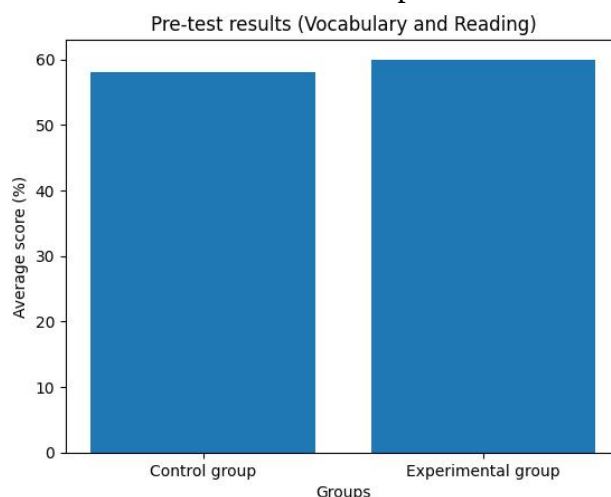


Figure 1 - Pre-test results of the control and experimental groups.

On the post-test, 25% improvement in vocabulary retention was evidenced by students in the experimental group compared to those in the control group. Post-test results reveal a large difference in terms of the learning outcomes among the two groups. Although both groups progressed in all ways, the experimental group got much better scores and thus proved that short interactive mobile lessons worked.

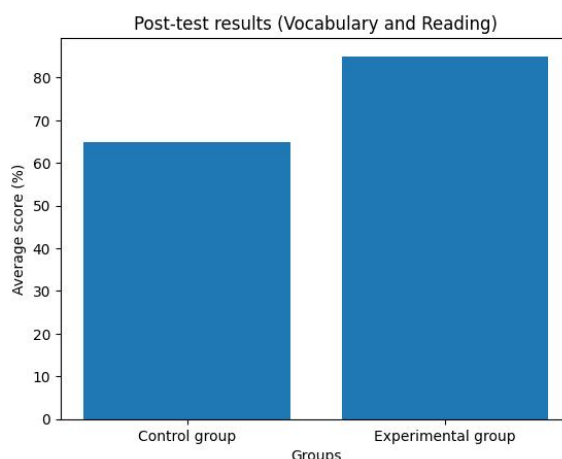


Figure 2 - Post-test results of the control and experimental groups.

These findings indicate that microlearning based instruction led to more effective memorization and recall of lexical items. The control group made only moderate gains, which can be attributed to the use of the traditional instructional methods. In addition to academic achievement, students' motivation and engagement were noted to differ greatly as well. In the test group, short mobile lessons resulted in learning opportunities being less stressful and more



accessible. The short duration of the lessons meant that students could work on one learning target at a time, alleviating cognitive overload and enhancing concentration.

These findings were confirmed further by teacher's qualitative observations. Learners that were involved in microlearning experiences exhibited more self-regulated learning behavior including voluntary learning, revision of materials and independent practice on mobile phone applications outside the classroom, which were not always achieved or performed in the classroom. Students engaged with digital content through active digital content learning, revisited assignments more than once, and were more self-motivated when participating in class discussions. In addition, students within the experimental group exhibited enhanced learning autonomy, having more control over the pace of learning and accessing instructional material when it was most convenient for them.

This accords with the theoretical tenets of microlearning, focusing on the learner's autonomy, personalization and choice. Altogether, the findings of the experiment support that for English language learners, short interactive mobile-only lessons increase the success rates, create an increasing motivation to learn English and foster a certain degree of student autonomy. These results are in agreement with those of previous studies, which also demonstrated the pedagogical value of microlearning in cognitive load reduction and active learning [1,5]. Accordingly, microlearning might be regarded as a good add-on teaching model for ELA in Kazakhstan.

Conclusion

In this study, the efficacy of microlearning as a teaching strategy for the teaching of English language is confirmed, which is relevant for teaching due to continuing educational digitalization in Kazakhstan. The gradual incorporation of brief, interactive mobile-based lessons in the learning environment showed an increase in student academic achievement, motivation, and autonomous learning.

The experimental results showed that students who had been taught using microlearning methods outperformed learners taught in traditional systems concerning vocabulary retention and a range of other academic outcomes. Short, goal-oriented learning units enabled students to focus on discrete linguistic goals, minimizing cognitive load, and enabling efficient knowledge acquisition.

These findings align with theories of cognitive load theory and learner-centred pedagogy. In addition to the quantitative benefits discussed, the study presents microlearning's potential for promoting individual learners' autonomy and self-regulation in learning behaviours. In the experimental group, students learned through active practice of mobile-based content beyond the classroom, self-paced and kept track of the pace of their own learning and showed more responsibility for their learning. Such an approach reveals that microlearning promotes not only language proficiency through skill acquisition but also as an essential resource for the development of twenty-first-century skills.

The findings suggest, from a methodological perspective, that the success of microlearning is contingent on its methodological incorporation into a systematic method with not only digital-based technologies but also with integrated pedagogy. The teacher is the key professional in creating microlearning content that is relevant, to support and to give feedback in time to a learner in making connections. Applied with explicit instruction as a planned part of instruction, this has a purpose-guided role of being supplementary to traditional teaching of the language of English.

These have led to the conclusion that microlearning is a sustainable and flexible method for modernizing English language education in Kazakhstan. Its alignment with national digital



education projects and modern pedagogical principles make it a hopeful framework for language teaching. Future research should extend the length of the study and include a bigger and more varied sample, or take into account other language acquisition skills beyond the microlearning.

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АҒЫЛШЫН ТІЛІН ОҚЫТУДА МИКРООҚЫТУДЫ ЕНГІЗУДІҢ ӘДІСНАМАЛЫҚ ҚАҒИДАЛАРЫ

Андатпа. Мақалада ағылшын тілін оқытуда микрооқытуды енгізудің әдістемелік негіздері зерттеледі. Ол микрооқытудың теориялық тұжырымдамаларын, соның ішінде оның оқушының дербестігі, жекелендіру және когнитивті жүктемені азайту принциптерін зерттейді, сонымен бірге оның заманауи цифрлық білім берудегі рөлін атап көрсетеді. «Цифрлық Қазақстан» ұлттық бағдарламасы оқыту үдерісіне инновациялық технологияларды кіріктіруге ықпал ететін қазақстандық білім беру контекстіне ерекше назар аударылады. Зерттеу қысқаша, интерактивті оқу бөлімдері студенттердің ынтасын тиімді түрде арттыратынын, сөздік қорын сақтауды қолдайтынын және белсенді оқуға ықпал ететінін көрсетеді. Эксперименттік нәтижелер микрооқыту негізіндегі сабақтар студенттердің белсенділігін, дербестігін және ағылшын тілін үйренудегі жалпы өнімділігін жақсартатынын растайды. Мақалада микрооқыту инновациялық педагогиканы цифрлық білім беру қағидаттарымен үйлестіре отырып, Қазақстанда ағылшын тілін оқытудың тұрақты дамуының перспективалы әдістемелік негізі ретінде қызмет етеді деп қорытындыланады.

Кілт сөздер: микрооқыту, ағылшын тілін оқыту, әдістеме, мобильді оқыту, цифрлық білім беру, Қазақстан, интерактивті оқыту, дербестендірілген оқыту.

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МЕТОДИЧЕСКИЕ ПРИНЦИПЫ ВНЕДРЕНИЯ МИКРООБУЧЕНИЯ В ПРЕПОДАВАНИЕ АНГЛИЙСКОГО ЯЗЫКА

Аннотация. В статье рассматриваются методологические основы внедрения микрообучения в преподавание английского языка. Рассматриваются теоретические концепции микрообучения, включая принципы автономии учащихся, персонализации и снижения



когнитивной нагрузки, а также подчеркивается его роль в современном цифровом образовании. Особое внимание уделяется образовательному контексту Казахстана, где национальная программа «Цифровой Казахстан» способствует интеграции инновационных технологий в учебный процесс. В исследовании подчеркивается, что короткие интерактивные учебные модули эффективно повышают мотивацию учащихся, способствуют сохранению словарного запаса и способствуют активному обучению. Экспериментальные результаты подтверждают, что уроки, основанные на микрообучении, повышают вовлеченность учащихся, их автономию и общую успеваемость в изучении английского языка. В статье сделан вывод о том, что микрообучение служит перспективной методологической основой для устойчивого развития преподавания английского языка в Казахстане, сочетая инновационную педагогику с принципами цифрового образования.

Ключевые слова: микрообучение, преподавание английского языка, методология, мобильное обучение, цифровое образование, Казахстан, интерактивное обучение, персонализированное обучение.