

USING APPLICATION IN TEACHING TECHNICAL ENGLISH

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Abstract. Undoubtedly, the use of smartphones and other portable wireless gadgets has changed the classic learning and represents a new revolutionary approach to education. There are many mobile applications for learning foreign languages. The classification of mobile applications can be based on various aspects, levels of language proficiency and foreign language learning goals. Most language learning applications are oriented on lexical material managing. The interactive source “Quizlet” was selected by us from a variety of alternatives for conducting an experiment on the effectiveness of memorizing English-language technical terms. This source has a mobile version for ease of use. “Quizlet” is an educational service for learning new words, which is quite interesting, as students can learn vocabulary while playing. The platform has different modes of learning. From the teacher’s point of view, this application is a well-developed platform for creating lexical training sets. One of the most convenient features of this service when creating a training set is to automatically display possible translations of the word and the corresponding image offered by the service. Charts to help the learner as a companion tool can also be created on this platform. To start using the application, simply follow the link <https://quizlet.com> and immediately begin to learn new words, because the application is free, and you can start learning instantly. The Quizlet mobile version is convenient and smart, but there are some differences between the site and the application, despite the fact that the main idea of the service remains the same. Our experiment included lexical material related to a particular field of technology. Visual, sound and graphic forms of the technical terms were used during the training as obligatory elements. The proposed memorization situations were also of two types: memorization from a sheet of paper, memorization using the application. Based on a comparison of the results obtained, conclusions were drawn about how effective/ inefficient the use of currently popular electronic applications for learning English is. This experiment showed surprisingly good results of memorizing words, regardless of the level of English language knowledge the specialization of the student. Non-technical students took part in the test as well.

Keywords: electronic applications; technical English; personal portable devices; Quizlet service; lexical training sets; application modes; application efficiency.

Introduction

In this article, we set ourselves the task of describing methods of research and determining the level of effectiveness of electronic applications using Quizlet as an auxiliary element in teaching English.

In the era of high technology, it is very important to keep up to the date. This applies to all spheres of life and education, science is no excep-

tion, and this is not just said: in the field of teaching foreign languages, updating methods and approaches to learning, a kind of reboot in HOW to teach, is necessary every 3 years.

Starting from the twenty-first century, the use of computers in teaching and learning of foreign languages is constantly increasing. Pedagogy, introduced with the help of technologies, and their assessment are the main issues of computer language training or CALL, defined as “the search and study of the use of computers in teaching and learning a language” [1. P. 14]. In addition, it has a CALL unit called MALL, which teaches using a mobile language. The main difference between these two concepts is that MALL involves the use of personal portable devices that allow you to access the Internet and study materials wherever you are.

Undoubtedly, the use of smartphones and other portable wireless gadgets has changed the classical teaching and represents a new revolutionary approach to education. There are many mobile applications for learning foreign languages. The classification of mobile applications can be based on various aspects, levels of language proficiency, the goals of learning foreign languages, etc. Ramya Gangayamaran and Madhumati Pasupati in their study “Overview of the use of mobile applications for language learning” classified mobile applications as “applications for elementary, middle and high school students and higher educational institutions” [2. P. 11–15]. Whereas the “Overview of Mobile Language Learning Applications: Trends, Challenges and Opportunities” reveals a classification focused on the language of instruction, supported platforms, payment aspect, user input, language aspect in the form of vocabulary, grammar and pronunciation and user interaction, for example, listen, read and write.

Research methodology

We conducted a study in the framework of a comparatively complex method, consisting in writing a test and testing students’ knowledge, their ability to memorize English words and working RAM in two different proposed situations. For the experiment, technical vocabulary was taken, and these initial data did not change, and the audience studying it was diverse: engineering students, economics students, advertising students (humanities) of different levels of English proficiency. The suggested situations of memorization were also of two types: memorization from a sheet, memorization using an application. Based on a comparison of the results, conclusions were drawn on how effective / ineffective it is to use currently popular electronic applications for learning English.

The methodological basis of this study was research in the field of applied linguistics: teaching English using a computer, Computer-Assisted Language Learning by Oxford University Press (as basic knowledge about

the computerization of the English learning process), and more specialized studies on the possibilities of using mobile applications as a learning tool, for example, Indian researchers – Ramya Gangaamaran, Madhumathi Pasupathi. Review on Use of Mobile Apps for Language Learning in the Journal of Applied Engineering – International Journal of Applied Engineering Research; A detailed study of European linguists (Catherine Regina Heil, Jason S. Wu, Joey J. Lee, Torben Schmidt. A review of mobile language learning applications: trends, challenges and opportunities) in the Eurocall almanac on the diversity and functionality of the entire complex of mobile applications used in training; work by Rezaei A... The Effect of Mobile Applications on English Vocabulary Acquisition, in the journal Jurnal Teknologi (Science & Engineering), on the impact of mobile applications on the more active assimilation of English vocabulary.

We also relied on traditional research in the field of educational psychology about the prevailing and generally existing ways of memorizing words, in particular, on the work of T.I. Pashukova, A.I. Dopira, G.V. Deacons. Workshop on General Psychology: a textbook for students of pedagogical universities.

The authors of the above review in their study concluded that most language learning applications were focused on learning vocabulary. We support this point of view and intend to take one mobile application for conducting an experiment based on teaching English for students of the Moscow Polytechnic University, who are mostly not humanities.

The Quizlet interactive source has been singled out from many alternatives. The main reason for his choice is its use in English classes at the Moscow Polytechnic University.

Quizlet is an interactive service for learning vocabulary from different languages. To start using the application, you just need to follow the link <https://quizlet.com> and immediately start learning new words, in addition to this, the application is free. The Quizlet application has a mobile version for ease of use, but there are some differences between the site and the application, despite the fact that the main idea of the service remains unchanged. From the student's point of view, Quizlet is an educational service for learning new words, which is quite interesting, as students can learn vocabulary during the game. The platform has different training modes.

Quizlet also allows teachers to follow the academic programs of their students, as the rating function is programmed. From the point of view of the teacher, Quizlet is a well-developed platform for creating lexical learning sets. Since our language combination is English and Russian, we use the following format: the word in English + its translation into Russian + the corresponding picture, supplemented by sound, as shown in Fig. 1.

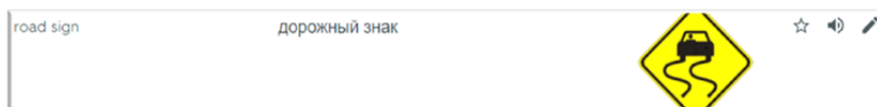


Fig. 1

You can create an English-English version in the format: a word in English + its definition in English + a corresponding picture, supplemented by sound, as shown in Fig. 2. This format has certain disadvantages, which we will describe below.

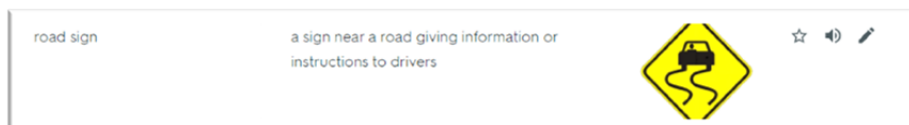


Fig. 2

One of the most convenient functions of this service when creating a training set is the automatic display of possible translations of the word and the corresponding picture offered by the service. Several translations and at least three images are usually offered automatically. Another effective feature is the ability to import words from Word, Excel, Google Docs, etc.

We also created diagrams on this platform. To do this, it was necessary to upload a picture and indicate the conditions. The diagram shows an example of learning auto parts. If we place the cursor on the blue circles in the picture, students will see words that can be displayed with their translations or definitions. The main disadvantage of this function is that there is a limit of 8 words for each chart, and if we use the free version, but paying for a specific updated version of the teacher allows us to add as many words as we want.

We had the following modes of using the application:

1. The mode “Flashcards” is quite familiar to most of language learners. A card with a new word appears on the screen, you have to click on it to flip it, so there will be the translation or definition of this word as well as the appropriate picture.

2. The mode “Learn” is quite smart, customizable and adaptive mode for learners. It offers different tasks for learning new lexis, using the fundamental if you get better, the questions get harder. You will start completing easier questions and eventually you will be quized with written questions as you gain mastery. The range of tasks consists of the following ones:

- a) You are offered an English word supplemented by a picture as well as four alternates of translation, you have to choose the correct one.

- b) A word in English with the picture is shown, you have to write the translation.

c) There is shown only a word without pictures, you have to type the correct translation in Russian.

The task set is programmed the way that all these varieties of tasks are repeated but you are proposed the Russian words, so your task is to write the correct English translation.

3. The mode “Write” includes only the format of translating words from Russian into English and vice versa. You are offered a word supplemented by the picture to be translated.

4. The mode “Spell” is focused on your comprehension of the English speech, you listen to a word and your object is to write down the translation. In addition there is a pictorial cue below the task.

5. The mode “Match” allow learners to match the words with their translation by dragging corresponding items onto each other to make them disappear. This mode is against the clock, so every time you succeed, you have a new time record. Furthermore having completed the round, there will be a table of the best results of other learners. This mode gets competitive principles.

6. The mode “Test” has the peculiarities of each above mention modes, as it is comprised of written, matching, multiple choice and True / False questions.

7. The mode “Gravity” is created in a quite entertaining way, the words to be translated in the shape of asteroids fall down during the programmed time in accordance with the chosen level.

The main difference between the site version and the mobile application is the lack of the definite modes in the app, as “Spell” and “Gravity”.

To identify the effectiveness of using Quizlet, an experiment was conducted in different groups of students of the Moscow Polytechnic University. It was decided to comply with the following procedure with different levels and specializations. At the beginning of the first lesson, students receive a list of 15 words, consisting of 5 nouns, 5 verbs and 5 adjectives. Here is an approximate example of a list of words:

1. ignition [ɪg'nɪʃ(ə)n] зажигание
2. jump lead ['dʒʌmp 'li:d] провод для прикуривателя
3. compressor [kəm'presə] компрессор
4. calculator ['kalkjʊleɪtə] калькулятор, вычислитель
5. crankshaft ['kræŋk.ʃɑ:ft] коленчатый вал
6. solidify [sə'lɪdɪfaɪ] твердеть
7. reciprocate [rɪ'sɪprəkeɪt] отвечать взаимностью; отплачивать
8. melt [melt] таять
9. transfer [træns'fɜ:(r)] переводить, перемещать
10. reverse [rɪ'vɜ:s] менять, перевернуть, дать обратный ход
11. rotary ['rəʊt(ə)rɪ] вращающий, вращательный
12. conical ['kɒnɪk(ə)l] конусообразный, конический

13. audible [ˈɔːdɪb(ə)l] слышимый, слышный
14. rapid [ˈræpɪd] быстрый
15. linear [ˈlɪniər] линейчатый, линейный

Most of these words refer to a specific technical field. They are taken from the textbook “Technical English. Level 2” by David Bonami. The list of words is written on a piece of paper. Students receive only words with translations into Russian and their transcription. They are given 15 minutes to learn these words. After learning the words, the students do not use these specific words during the lesson, but at the end of the lesson they must complete the exercises in the test proposed by the teacher. This is a regular vocabulary test in which students must translate words from Russian into English and vice versa. They have only 10 minutes to complete this.

At the beginning of the second lesson, students are sent a link https://quizlet.com/_591rxo, which is a link to a set of words created by teachers in the Quizlet application. The set of words contains 15 terms of a specific technical field. These 15 terms are 5 nouns, 5 adjectives and 5 verbs.

Students are given 15 minutes, as well as in the case of learning words from the list. Quizlet allows teachers to add a word with its translation, the corresponding picture and the correct sound of the term. After 15 minutes of training, the teacher offers a different type of work without using these terms during the lesson. At the end of the second lesson, students must pass a test similar to the first, which means that the types of tasks coincide. They have 10 minutes to write down their answers. It is very important not to use these specific words during the lesson, since it is such a condition that recreates the situation when students study words outside the university.

Results

Testing in groups of various levels and specializations in a total of 127 students gave completely unexpected results. The result was predictable when students of level A2-B1 of technical specialties gave a result from 85% to 100% in 89% of the group (while excellent students in the amount of 9 people almost all wrote the text without errors, with the exception of 2 people who showed about 90% assimilation); The result is surprising when much less prepared first-year students who have never completed a textbook of this level of difficulty and sphere have yielded a result close to the same as in advanced groups: about 84% of students in 79% of students in a weak group of learners. It must be emphasized that the phrase “students who have not mastered textbooks in this sphere” means that almost nowhere and never before this experiment were students familiarized with technical terminology in English. Moreover, as we can see from the above list, these words have a high degree of complexity in spelling, lexical and orthoepic aspects. However, despite this, the results of mastering this vocabulary are close in meaning.

This means that mastering even quite complex technical terminology is successful, regardless of the level that the student initially has! This result is truly compelling, since it is possible to master vocabulary at the intermediate and higher levels – “in practice, this task is not as easy as it can be assumed when studying English at previous levels” [3. P. 1]. But mastering it is a very important task, since this knowledge paves the way not only for fluency and understanding of the language being studied, but also for obtaining a prestigious job. A lot of books have been written in which all the effective techniques for memorizing words are presented, including mnemonics; different books present different options for grouping words – in the form of lists, paradigmatic chains, thematic groups of words – a choice that is suitable specifically for each individual student. Groups of words are accompanied by Russian comments in the form of words, expressions, sentences, offering associations for memorization. Finally, one-root words are given with definitions of the parts of speech in order to look into the dictionary each time, i.e. the main material on word formation is given: on the meanings of suffixes and prefixes in the English language, as well as the main ways of word formation of nouns, adjectives and adverbs. There are many manuals on associations – recognized as the best way to memorize words of a foreign language, however, all these methods did not give us the results presented in tests for the study of vocabulary with an electronic application. Since even the weakest students of technical specialties of the A1–A1-level showed up to 50% mastering this complex technical terminology in 20% of cases, and the remaining 80% learned it by 35–40%.

The unexpectedly positive test result from techies gave rise to an even more desperate idea – to conduct an experiment on different ways of memorizing words from non-techies. For this, 2 groups were taken for testing – economists and advertisers – 15 and 21 people respectively. In terms of language skills, economists were on average close to A2, and advertisers were mostly A1. Students passed exactly the same 2 stages of testing: on paper and using the application and showed the following results. Economists demonstrated 68% of the assimilation of technical terms in the whole group of 15 people, and advertisers, humanities, even higher: 74% of the material proposed for memorization [4–7].

Conclusion

Mastering academic disciplines using electronic portable technology for the generation of the 2000s is the natural and most effective process in terms of mastering the material. The overwhelming majority of 18–20 year olds have become familiar with portable equipment in early childhood. This means that the electronicization and modernization of modern authentic techniques, their partial translation “from paper” into a gadget is more than

justified. It should be borne in mind that in the future this process will need to be strengthened – at present, acquaintance with electronic means occurs already in very early childhood, and we can often observe 3-year-old children managing it very quickly.

Studying the technical vocabulary of the English language using the Quizlet application did not cause any significant difficulties for students during testing. Moreover, the experiment showed unexpectedly high results for both groups of students of technical specialties and humanities; both for well-trained students and beginners. The application of the method shows its incompatibility with the phenomena of stagnation in learning, an increase in knowledge occurs in different students with a high degree of assimilation: all the learning goals set by students were completed. A high result was ensured by the fact that the presentation of each individual term was implemented in all possible forms: pronunciation, spelling, graphic image, its translation.

Such a high percentage of mastering the material is probably due to the fact that gadgets are more likely a means of entertainment, for which the vast majority of children have time limits, in this case they work at maximum efficiency, since there are no restrictions and prohibitions – work and do you think it is necessary. This psychological aspect of the issue, however, deserves further or a separate study.

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ИСПОЛЬЗОВАНИЕ ПРИЛОЖЕНИЙ В ОБУЧЕНИИ ТЕХНИЧЕСКОМУ АНГЛИЙСКОМУ

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Аннотация. В последние десятилетия классическое обучение иностранным языкам претерпело революционные изменения благодаря использованию смартфонов и других портативных беспроводных гаджетов. Существует множество мобильных приложений для изучения иностранных языков. Классификация мобильных приложений может основываться на различных аспектах, уровнях владения языком, целях изучения иностранных языков. Большинство приложений для изучения языка ориентированы на изучение лексики. Интерактивный источник «Quizlet» был выделен нами из множества альтернатив для проведения эксперимента на эффективность запоминания англоязычных технических терминов. «Quizlet» – это образовательная услуга для изучения новых слов, которая довольно интересна, так как студенты могут изучать лексику во время игры. Платформа имеет разные режимы обучения. С точки зрения преподавателя, это приложение представляет собой хорошо разработанную платформу для создания лексических учебных сетов. Одной из наиболее удобных функций этого сервиса при создании учебного сета является автоматическое отображение возможных переводов слова и соответствующей картинки, предлагаемой сервисом. Диаграммы в помощь обучающимся как сопутствующее средство также могут быть созданы на этой платформе. Чтобы начать пользоваться приложением, надо просто перейти по ссылке <https://quizlet.com> и можно начать учить новые слова, поскольку приложение бесплатное. Приложение Quizlet имеет мобильную версию для простоты использования, но есть некоторые различия между сайтом и приложением, несмотря на то, что основная идея сервиса остается неизменной. Наш эксперимент включал лексический материал, относящийся к какой-то конкретной области техники. Визуальные, звуковые и графические формы слов использовались во время обучения как обязательные элементы. Предлагаемые ситуации запоминания были также двух типов: запоминание с листа и запоминание с использованием приложения. На основе сравнения полученных результатов были сделаны выводы о том, насколько эффективно / неэффективно использование популярных в настоящее время электронных приложений для изучения английского языка. Данный эксперимент показал удивительно хорошие результаты запоминания слов вне зависимости от уровня знаний английского языка и специализации студента.

Ключевые слова: электронные приложения; технический английский; персональные портативные устройства; сервис «Quizlet»; лексические учебные сеты; режимы приложения; эффективность использования приложения.

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