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THE APPLICATION OF AI-POWERED AND DIGITAL TOOLS IN TEACHING VOCABULARY

ABSTRACT

This paper aims at highlighting the importance of incorporating some digital and AI tools in the process of teaching vocabulary. Traditional methods will always remain at the core of teaching, however, with the development of new technologies, teachers also need to change their approaches and methods by incorporating digital activities into their course. This helps to attract the attention of the new generation that has grown on digital tools. Although teachers often do not warmly welcome the application of AI tools by learners and continue to recommend them not to rely on artificial intelligence for fulfilling their tasks, students continue to widely apply them in their educational activities. It increasingly becomes impossible to stop learners from using those tools in their study. Thus, teachers have no other choice but to turn this challenge into a chance. For doing this, teachers could elaborate relevant approaches to include these modern-day tools in their lesson planning and to transform their teaching methods according to the new tendencies.

The research was carried out by the application of the experimental method to foster student engagement and to provide our study with practical value, as well as with empirical evidence. This method also helped

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us create proper conditions for students to apply the newly acquired knowledge in practice.

The results and findings discussed in this research have shown that the application of Al-powered tools in teaching vocabulary can lead to effective and active teaching in different educational institutions. Moreover, Al-powered digital tools help the teacher choose certain tasks and vocabulary levels according to the individual needs of every learner, which provides the course with effectiveness and raises its productivity.

Key Words: generate wordlists, vocabulary assimilation, Al-powered tools, vocabulary retention, active method, word quiz, individual needs, student engagement.

ԱՄՓՈՓՈՒՄ
ԱՐՀԵՍՏԱԿԱՆ ԲԱՆԱԿԱՆՈՒԹՅԱՆ ԵՎ ԹՎԱՅԻՆ ԳՈՐԾԻՔՆԵՐԻ ԿԻՐԱՌՈՒՄԸ ԲԱՌԱՊԱՇԱՐԻ ՈՒՍՈՒՑՄԱՆ ԳՈՐԾԸՆԹԱՑՈՒՄ

Սույն հոդվածը նպատակ ունի ընդգծել բառապաշարի դասավանդման գործընթացում որոշ թվային և արհեստական բանականությամբ աշխատող գործիքների կիրառման կարևորությունը: Նոր տեխնոլոգիաների զարգացման հետ մեկտեղ ուսուցիչները ստիպված են փոխել իրենց մոտեցումներն ու մեթոդները իրենց դասընթացում ներառելով թվային գործիքներ: Չնայած այն հանգամանքին, որ ուսուցիչները պարբերաբար հորդորում են սովորողներին չկիրառել արհեստական բանականությամբ գործող թվային գործիքները իրենց առաջադրանքները կատարելու համար, վերջիններս շարունակում են լայնորեն կիրառել դրանք իրենց ուսումնական գործունեության նպատակներով: Այս հանգամանքը հանգեցրել է նրան, որ ուսուցիչները նույնպես կարիք ունեն այդ գործիքները կիրառելու դասը պլանավորելու և իրենց դասավանդման մեթոդները նոր միտումներին համապատասխանեցնելու համար:

Հետազոտությունը կատարվել է փորձարարական մեթոդի կիրառմամբ սովորողների ներգրավվածությունը խթանելու և մեր ուսումնասիրությանը գործնական արժեք հաղորդելու համար: Հետազոտության մեջ քննարկված արդյունքներն ու եզրակացությունները ցույց են տալիս, որ արհեստական

բանականությամբ աշխատող գործիքների կիրառումը բառապաշարի դասավանդման գործընթացում կարող է հանգեցնել ուսուցման արդյունավետության: Ավելին, արհեստական բանականությամբ աշխատող թվային գործիքները օգնում են դասավանդողին ընտրել որոշակի առաջադրանքներ, կամ բառապաշարի հատուկ մակարդակներ յուրաքանչյուր սովորողի անհատական կարիքներին համապատասխան:

Բանալի բառեր՝ բառացանկ ստեղծել, բառապաշարի յուրացում, արհեստական բանականությամբ աշխատող գործիքներ, բառապաշարի պահպանում, ակտիվ մեթոդ, բառային թեստ, անհատական կարիքներ, ուսանողների ներգրավվածություն:

РЕЗЮМЕ
ПРИМЕНЕНИЕ ИИ И ЦИФРОВЫХ ИНСТРУМЕНТОВ В ОБУЧЕНИИ ЛЕКСИКЕ

Целью данной статьи является подчеркивание важности включения некоторых цифровых и ИИ-инструментов в процесс обучения лексике. Традиционные методы всегда будут оставаться в основе обучения, однако с развитием новых технологий учителям также необходимо изменить свои подходы и методы, включив использование цифровых инструментов в свой курс. Это помогает привлечь внимание нового поколения, выросшего на цифровых инструментах. Несмотря на различные рекомендации учителей не полагаться на искусственный интеллект для выполнения своих задач, учащиеся продолжают широко применять ИИ-инструменты в своей учебной деятельности. Становится все более невозможным запретить учащимся использовать эти инструменты в своем обучении. Таким образом, у учителей нет другого выбора, кроме как превратить этот вызов в шанс. Для этого учителя могли бы разработать соответствующие подходы для включения этих современных инструментов в свое планирование уроков и трансформировать свои методы обучения в соответствии с новыми тенденциями. Исследование проводилось с применением экспериментального метода для стимулирования вовлеченности учащихся и придания нашему исследованию практической ценности.

Результаты и выводы, обсуждаемые в этом исследовании, показали, что применение инструментов на базе ИИ в обучении лексике может способствовать эффективному и активному обучению в различных учебных заведениях. Более того, цифровые инструменты на базе ИИ помогают учителю выбирать определенные задания и уровни лексики в соответствии с индивидуальными потребностями каждого учащегося, что обеспечивает эффективность курса.

Ключевые слова: генерировать списки слов, усвоение словарного запаса, инструменты на базе искусственного интеллекта, сохранение словарного запаса, активный метод, словарный тест, индивидуальные потребности, вовлеченность студентов.

In the comprehensive process of language teaching, the instruction of vocabulary plays a pivotal role, as lexical competence significantly influences learners' general communicative ability (Nation, 2001). Traditionally, the instruction of vocabulary has been realized through different methods that are still effective and applicable nowadays. These methods involve memorization, vocabulary lists and dictionary usage. Other methods focus on repetition and contextual usage, that are crucial for long-term retention (Schmitt, 2000,). However, the quick changes and the development of technologies made considerable transformations in the existing teaching methods. With the development of different technologies, different digital applications started to serve as interactive educational tools. Teachers and learners started to actively use these applications for teaching and learning purposes. Traditional methods continue to be fundamental, and novel methods have become commonplace, as they turned to be useful, quick, more comfortable, and effective.

Today, artificial intelligence tools provide various opportunities for both learners and instructors. They help learners do tasks easily, find the proper

ways of pronunciation in reading, translate abstracts, make presentations and so on. Both teachers and learners benefit from this opportunity by applying different apps. Some of them, that are widely used by learners, are Duolingo, Chat GPT, Quill Bot and others. Making

an incidental and unguided use of these tools is impermissible for learners from a methodological point of view, as it can lead to fallacies in learning. These applications can be useful for different instances; however, they can pose various challenges to learners as well. Using only digital tools, learners cease looking up words in paperback dictionaries, which usually serve as sources of acquiring additional knowledge. Moreover, using only these tools for individual learning entails cultural and socialization problems. For this reason, scholars caution against unguided learning with digital tools, noting that the absence of teacher mediation may lead to shallow understanding and misuse of vocabulary (Boulton,2016; Hubbard, 2009). Thus, for an effective outcome learners need professional instructions by the teacher to acquire and apply new vocabulary.

   Together with different challenges, that digital or AI tools could bring, these tools can best be applied by teachers to plan and organize lessons. In the new world teachers have a wide range of options to organize the lesson by using such Al-powered tools, as Wordsmyth, Quizlet, Padlet, Magic Padlet, Crossword Puzzle Generator and others. In the process of teaching vocabulary instructors usually prepare lists for the thematic vocabulary and single out wordlists for each group or class. Nowadays it has become much easier for instructors to generate thematic word groups, taking into consideration the specific purposes of learners. Moreover, the opportunities

that the abovementioned tools provide, include the possibility of creating wordlists, word quizzes, crosswords not only according to the given course curriculum, but also according to the individual needs of the learner. The advantage of such tools is that they provide learners and teachers with immediate feedback, multimodal learning opportunities and gamified experiences that increase motivation (Godwin-Jones, 2018; Zawacki-Richter et al, 2019). Moreover, mobile, and web-based vocabulary tools facilitate spaced repetition and contextual learning, which are essential for vocabulary retention (Stockwell, 2010).

Alongside **with** different tools, we have experimented the method of working with Magic Padlet and Wordsmyth, which has proved to be effective in teaching vocabulary. The study was conducted by enrolling 4 groups of students, each consisting of 16 to 21 students (all in all 74 students). Two groups were instructed by the application of traditional methods of teaching/leaming vocabulary and the next couple of groups were taught through digital and AI tools. It goes without saying that the group instructed by traditional teaching methods, mastered the vocabulary without any difficulty and boosted their proficiency acquiring the new word stock. However, the group that was instructed by digital methods and AI tools, proved to develop more competences. At the end of the course, students gave feedback of becoming more self-confident and skilled after having completed the active learning process.

Active learning involved giving the students a list of new words for learning and then making a quiz on some of the tools (Padlet, Quiz maker, Crossword Puzzle Generator etc.). It goes without saying that every teacher

has numerous wordlists concerning different spheres of the language. However, when

they are not at hand, contemporary methods can help to realize the lesson plan on time and, what is most important, to make the vocabulary learning process more active, motivating, and interesting. Let's consider an example, that can illustrate the case. The teacher uses an AI tool to single out words for learners of

business English.

Profit	
	Unemployment rate
Monetary policy	Income
Supply and demand	Customer
Budget deficit / surplus	Inflation
Exchange rate	Scarcity
Stock market	Monopoly
Shares	Client
Gross Domestic Product (GDP)	Interest rate

The AI tool generates the necessary list. The teacher gives the list to the students, they have a look at them and try to memorize. After discussing the definitions and equivalents of new words and word-combinations and after having assimilated and retained the meanings, students can be given a quiz, exercise or crossword that involves the most difficult words that were newly learnt. For instance, let's consider the following example. We use any of the abovementioned tools to create an exercise for our students constituted of the list mentioned above.

1. What does GDP stand for?

A) General Debt Proportion

B) General Domestic Policy

C) Government Debt Percentage

D) Gross Domestic Product

Answer: D

2. Which of the following best describes a monopoly?

A) Complete control of business

B) Many sellers of identical products

C) No competition among firms

D) Government-regulated prices

Answer: A

3. What is profit in economic terms?

A) Money invested in a company

B) Revenue minus expenses

C) The total revenue earned
D) Sales before taxes

Answer: B

4. What is income?

A) The value of goods sold

B) A type of government tax

C) Money earned by an individual or business

D) The cost of production

Answer: C

In this sample we can see, how professional vocabulary can become easier to remember. First, they assimilate and then they remember the new words due to the retention process. For the next, upcoming lesson the teacher can ask the learners revise the newly acquired vocabulary to organize active learning in class. This could involve peer check through the application of any of the AI-powered digital tools, that the teacher has introduced to the learners (Genially, Padlet, Quiz Maker, and so on). For instance, they organize a game that checks the vocabulary of the previous lessons. If the auditorium (or the classroom) is equipped with a digital board, students can show their work on the board by involving their peers in the game or quiz. Wordsmyth and Padlet are effective tools for making tests. In addition to creating glossaries, teachers can use these tools to create quizzes, crosswords, tests, and matching exercises to assess students' vocabulary retention progress. Activities like this create an atmosphere of active learning and engage even the most demotivated learners. Very often learners become demotivated because of their low level of knowledge. And, as it has been noted, students need to use strategies for learning vocabulary; these strategies depend on their level, age, and needs (Hendra, 2011; Gardner, 1985; Bruner, 1966). Due to Al-powered digital tools, the teacher can choose specific wordlists taking into consideration the learners' specific needs, so that each learner could improve his or her vocabulary and have the desired outcome.

To sup up, the integration of digital and Al-powered tools into vocabulary instruction has significantly transformed the language learning process. While traditional methods remain effective and form the foundations of the teaching practice, the introduction of technology has enhanced the

efficiency of vocabulary acquisition, student engagement and motivation. Digital tools like Padlet, Wordsmyth, and Quizlet assist teachers in tailoring wordlists, interactive exercises, and quizzes that promote active learning and deeper retention.

The comparative study demonstrated that students exposed to digital methods developed stronger competencies and greater confidence in using new vocabulary, highlighting the effectiveness of such tools when implemented thoughtfully. However, it is essential that their use is guided by pedagogical principles to avoid misconceptions and promote meaningful learning. Ultimately, when technology is used in balance with teacher-led instruction, it fosters a more dynamic, motivating, and student-centered approach to vocabulary learning: one that accommodates diverse learner needs and equips them for success in an increasingly digital world.

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