



Digital Tools and Their Role in Enhancing English Vocabulary Retention

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Abstract

In the 21st Century, there is no doubt about how critical digital technology has become in the education sector. It has permanently transformed the way students grasp and retain knowledge. Learners' progress in expanding their English lexicon through the use of digital resource also fosters such tools as mobile apps, online dictionaries, e-learning resources, podcasts, videos, interactive classrooms, and clicking all the way up to the Word Bucket in order to fill and combine words. The above software and hardware tools make the learning process more appealing and less mechanical in nature, with students not only participating at going beyond simple repetition but also being able to make use of complex elements of multimedia pictures, sounds, and animations to reinforce memory and enhance retention for a longer time. Learning software and mobile apps, for example Duolingo, Quizlet or Memorise, involve gamification wins, adaptive learning paths and course tracking so that students keep practising. For linguistic practice interactive quizzes also allow pair production where learners can use the new words in sentences. Furthermore, intelligent programs are also designed in such a way, that they help the learners to learn and internalize the words in sentences and beyond. On the whole, the acquisition of new words with the use of digital and advanced language learning apps has become both fun and easier than previously thought possible. Also, while using these digital learning technologies.

Keywords: Digital tools, English vocabulary, language learning, vocabulary retention, e-learning, mobile apps, technology in education.

Introduction:

In the modern digital era that we live in, the extensive use of technology impacts practically any field where humans operate, education and communication not being the exception. The study of foreign languages, particularly English, witnessed significant changes thanks to the emergence of electronic gadgets and software for distance learning. As most countries rely on the English language as the language of communication, commerce, science and knowledge, learning is inevitable. Hence, it is important to stress the need to improve vocabulary for the purposes of eloquence in speaking out, reading skills, writing, and in listening. Still, the difficulty in language learning comes when it concerns words. More specifically, advances in vocabulary acquisition require memory strategies that assist learners in recalling vocabulary items they have learned and restricting the words they have yet to utter to their wrote memory. In the past, learners had no choice, but to resort to the likes of learning by heart, using a dictionary, and indulging in exercises in the class. While such approaches are widely used nowadays, they do not captivate students for an extended period and are less effective in terms of long-term retention of what has been learned. The majority of users cannot remember any new words soon after they have been studied because conventional strategies do not demand any mental participation, let alone learning in context. Fortunately, educational technology has produced a new way of vocabulary acquisition by providing new types of tools which stimulate learners' activity while helping them to acquire as well as keep vocabulary.

Digital tools are those tools or devices that are used in the process of language learning including technology such as mobile applications, web resources, dictionaries (being especially used as language learning aids only), audio and video clips, and other language learning media. Among such tools are: Duolingo, BBC Learning English, Quizlet, Memorise, and Google Classroom. Modern software-based language teaching tools have come a long way beyond the so-called "language downloads" as they combine video, audio and text aids which help learners place words in their proper contexts. This twin-peaked, or multi-memory-triggered approach to vocabulary retention is more effective because this event or context three-dimensionality helps remember how and why a word is associated with particular place better. To promote

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long-lasting retention, students' vocabulary can and should be taught and reviewed at least once a week. By following free biology eBooks Tired of paleo recipe books that don't work free 30-day trial true eco-friendly visuals as well, many other pedagogical aids can be incorporated effectively under the WEB 2.0 umbrella. This is because as a word can be explained with a new meaning, knowledge of its known or previously learned meaning will be useful making a learner to remember experience.

The idea of digital tools enables personalization in specific terms, is the one that is of great importance. As opposed to the way things are taught in the typical classroom; that is students learning at the same pace and in accordance with the same material, in digital learning, artificial intelligence and adaptive learning are utilized to change the pace and material of the lessons based on how well the learner is doing. For example, some systems automatically provide more practice on the words or phrases that a learner tends to experience difficulty with for one reason or another. In this manner, the learners are only able to work on what they do not understand in order to build on it further and hence, improve the value of the information.

Digital tools assist in enhancing learning by enabling independent and self-paced study. To add to, learners have the ability to study with the use of mobile applications and personal computers at any time and place. This schedule makes it possible to include vocabulary enrichment and learning due to a relaxation in constraints concerning the teaching of foreign languages inside the school. Consequently, students begin to demonstrate initiatives in education and learn to build independent study skills, which, in turn, are necessary in the education to the end of old age.

This shared experience is especially important for language education. Those who seek to learn a new language typically study it in the so-called educational medium that has its own facilities to help them master the language. For young learners, there are special online courses aplenty. However, it is almost impossible to create the required language context and motivation using artificial learning and even social interactions (Zou, 2007); these kinds of teaching methods are effective though mostly insufficient especially for adult learners (Brosnahan, 1998). What is more, printed language materials are available almost everywhere because they do not rely on technology unlike audiovisual aids such as videos, CDs, and cassettes, and they are user-friendly and allow one to highlight or to make dots to better understand the text. Feedback, which may be presence of the teacher, or written comments can be provided as an additional source of help to the students.

Teachers need to realize this very important role of the lexical aspect of language and teach it properly. But this would require ongoing learning at the expense of the other four language skills. Looking from above, the adoption of digital devices in English Language education can be seen as a change of the traditional layout of teaching - from 'teacher controlled' to 'learner controlled'. This means that the students themselves are no longer just the recipients of information and they do not just accept but also make sense of the information through their use of digital platforms. Consequently, teachers do the guiding of students through instructions in using computers and writing programs.

To sum up, the usefulness of digital tools in vocabulary instruction is a notable aspect of its development. These aspects comprise the use of interactive technology in the learning procedure and also linking it with the emotional and possibly attitudinal factors which are associated with learning. Without any hesitation, it will be possible to state that these tools can boost the extent of learning of English vocabulary. Linguistic study tends to facilitate solutions for these difficulties; moreover, this study incorporated assessment of types of media, especially technologies in the context of language education. It is apparent that education offers a clear contrast to older approaches and suggests more advanced, better and more learner-oriented methods of vocabulary expansion.

Literature survey:

Developing a rich lexical resource is essential in studying a language for a number of reasons: it helps in speaking, comprehension of texts, and writing. For example, Alqahtani, (2015) International Advance Journal of Engineering, Science and Management (IAJESM)



stresses that word learning strategies enable vocabulary building in second language learning pointing out that these methods should be learner and context based, task oriented which requires meaningful lingual activities, and which demands regular practice and allows for modification of old techniques. This is also supported by research carried out by Laufer and Goldstein, 2004, who demonstrated that learning new words by simply reading is not sufficient, and learning vocabulary requires active practice, context usage and redundancy to achieve expected learning.: merits of learning in an explicit manner m[of] language.

Digital technology and e-learning systems have radically changed how vocabulary teaching is conducted. Particularly, in a work by Chen and Lee (2011), with the focus on emotion-based adaptive e-learning system, it was stated that a technology that can adapt to the mood of the students increases the degree of engagement, motivation, and efficiency of the students in the learning process. Sun and Chen (2016) added that vocabulary learning which was proposed in interactive modes through computer-based tools or digital systems not only improved trainees' motivation and retention but also provided interactive exercises, spaced repetition and personalized feedback. In the same vein, Yang and Chen (2018) conducted such a study showing how, in contradiction to in-residence academic vocabulary development, even without the Spanish language in the class, mobile apps and digital platforms are an effective means of students learning vocabulary and engaging them with vocabulary focused work inside the university.

Mobile technology is changing the way that languages are learned, with some researchers finding it to have more inconclusive benefits. A review of language learning literature by Godwin-Jones (2018) has described how mobile language learning is indeed flexible since vocabulary enhancement can act as one product of 'automated' learning, for which there is noteworthy in supply and variety. Stockwell and Hubbard (2013) also included a list of guiding principles for mobile language learning of applications. There was also encouragement to access the current design of language learning applications in a way in which more responsibility is assumed for reaching the desired learning objectives in the effective learning of vocabulary.

Mangen, Walgermo and Brønnick (2013) further point out that students tend to understand more while reading linear texts on paper rather than on digital screens, but this gap is narrowed by interactive digital materials that contain multimedia, gamified activities and instant response enhancing the process of vocabulary acquisition and preservation. Warschauer and Healey (1998) also support the efficacy of computer-assisted language learning, noting that technology boosts language education in that it is capable of promoting interactive, collaborative and constructionist language education. Effective application of gamification as a technique in maintaining newly acquired vocabulary in one's memory has lately been identified. In their study, Zarei and Mohammadi (2020) examined a number of reviews conducted on the topic in recent times said that game elements, including points, badges, missions, levels contribute tremendously to attraction, involvement, and reinforcement of memory. The findings across the included studies indicate that the use of technology-enabled interactivity and learner-center approach of teaching vocabulary promotes its learning and retention among students.

As a result, it has been noted that the combination of digital learning media and platforms, electronic learning platforms, mobile apps, and games can play an important role in promoting the learning of English vocabulary significantly among the young learners. These have elements of enhancing interactivity and personalizing the environment where learning can be enjoyed through numerous activities that promote the use of vocabulary, which in turn ensures the continuation of practice and motivation towards the achievement of a specific result.

1. Digital Tools

Digital tools are things, especially devices, tools or instruments that function to support learning or educational activities alongside that a computer or technology is used in them.

When it comes to learning a foreign language, digital tools refer to such items as various software applications, online instruments, iPhone or iPad applications, appropriate web pages,

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e-learning courses and visual aids that facilitate learning in a fun and engaging way. To put some words into pictures, some of these include Duolingo, Quizlet, Memorise, Google Classroom, BBC Learning English and YouTube educational channels.



These instruments generally deploy a mix of text, audio, video, and graphic components that energize a learning session. Generally, they increase the rate at which learners come across and put to use new vocabulary, grammatical structures and sounds through exercises, flashcard practice, crosswords, activities, and the option of receiving immediate feedback. Such tools have a significant advantage in that users can access them whenever and wherever they feel like this, thereby enabling self-learning which could be either at a fast pace or a slow pace. Furthermore, the majority of such tools employ Artificial Intelligence (AI) and machine learning approaches to monitor a learner's progress and deliver customized instructions, which are aimed at the enhancement of the impact made on the learner through vocabulary acquisition exercises.

2. English Vocabulary

In the field of language learning, vocabulary is defined as words that a person is familiar with and employs within a certain context. Among the imperative elements that are crucial when studying the English language is the English vocabulary. This is necessary because one is required to express their ideas, understanding what they hear and read and also writing well. They can't create or understand their meanings if there is a missing piece that is vocabulary.

The use of words in English can be split into:

- **Active vocabulary:** The words that are employed whilst using the language in writing and speaking.
- **Passive vocabulary:** The words that are recognized as one hears or reads but are not used often.

In order to expand one's vocabulary in English effectively, it due to engage in repeated practice and usage, as long as a given requirement about the level of exposure. The latter can be done with the help of E-tools, which provide numerous activities as word games, quizzes, pronunciation guides, and example-based learning so that when new vocabulary is learnt it is not only acquired but also remembered for a very long time

3. Language Learning

Language learning can be defined as the process of acquiring or improving the foreign language user's reading, writing, speaking and understanding skill set. One is constantly learning new vocabulary, different grammar structures, correct pronunciation features and as well as lessons in communication. In earlier times teachers used to teach in the classrooms in the process of learning a language with the help of books. Such kind of education has also greatly evolved over the time with the advent of lots of technologies such as computers, software and digital screens.

Under its current light, language learning puts a strong accent on communicative aspects and aspires to provide a lot of opportunities for the active exploration of the language in concrete situations. Virtual training environments, for example, facilitate the constructive use of chatbots, and online forums for the students. Moreover, they make it easy for the students to



hear, speak and read the language in real life activities through the use of podcasts, videos or text materials. This stimulates the process of acquisition – which is the closest analogue to the natural accrual process in the learning of the mother tongue.

In summary, technology has made language learning much easier, interactive, and efficient, providing opportunities for learners to practice speaking, listening, etc. in a variety of approaches garments.

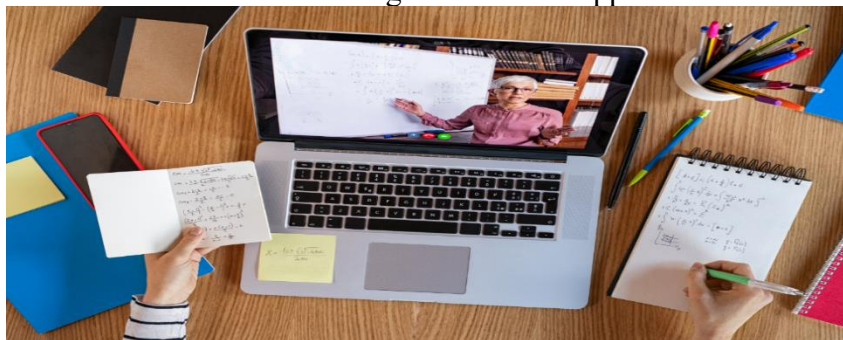
4. Vocabulary Retention

Vocabulary retention refers to the ability of learners to remember and recall newly learned words over a long period of time. It is one of the most difficult tasks in language learning because most people tend to lose words quickly after learning them, if they do not encounter them regularly. Effective vocabulary retention is achieved specifically by the processes of reinforcement, similarity, and appropriate use. For example, it is easier for learners to remember a new word when they hear it spoken in various contexts other than seeing its image and using it in a sentence. With electronic products such as SRS applications, video and audio material which help to achieve retention, and interactive exercises also successfully complement vocabulary retention efforts for learners.

Applications like Anki and Quizlet teach words in a repeating pattern; The applications keep reminding learners until the word is mastered. And so do games, quizzes and videos, which for many people are more fun and remember-able compared to memorizing or repeating endless lists of words. To this end, technology enhanced language learning incorporating psychology has made great strides in improving vocabulary acquisition in Second/Foreign Language Learning.

5. E-Learning

Distance learning, commonly known by the term e-learning allows learners to acquire learning without the typical classroom dynamics and physical settings. This enables students to undertake their programs of study with virtual classrooms on the web, recorded lectures, and through self-instruction or CBT (Computer Based Training), which is done on the CDs. E-learning in language teaching allows learners to engage in English lessons and other related activities directly from personal computers, tablets and smartphones through websites that are able to provide them with such lessons using multimedia support.



Online teaching has a number of advantages, with the key ones being that it allows for self-paced learning, and that it is accessible and allows for self-directed learning. Students can advance their knowledge and retake courses if they please and are also accounted for with the help of the systems-embedded tools. E-Learning also encourages the idea of learning later in life as people do not have to be at a specific place at the specific time to learn.

E-learning is a concept whereby learning usually takes place without physical presence of the teacher or while the learner is not attending the traditional classroom.

6. Mobile Apps

Mobile applications, simply known as mobile apps, are programs intended for use on smartphones or tablets. They are among the most widely used technologies for language learning, and one of the reasons is because they are travel friendly in most cases as they can be carried around easily. Thus, mobile apps like Duolingo, Memorise, Babel, Hello English, and



Busuu have incorporated micro lessons that are interesting in the learning vocabulary, grammatical structures, and pronunciation.



Many of these strive to have interactive learners and have mechanisms such as points, life, levels, badges among others just to motivate them. Most of them do contain feedback system, so that whenever the users, learners make mistakes, they are immediately made to correct them. A lot of these applications have mouse free controls and speech recognition technology, in addition to traditional flash cards, quizzes, and repetition type exercises, which are known to aid in the efficient retention of vocabulary items. The development of mobile applications has made it easier for English to be learned by people, regardless of their background, and their age, especially in the periphery or where there is no English language.

7. Technology in Education

Educational Technology (EdTech), more popularly known as Educational Technology, pertains to the use of electronic devices, computer and web-based systems and resources that facilitate learning. Technologies involved in this field include abacus, calculator, computer, data projector, e-learning, electronic whiteboard, everyday technologies in teaching, GPS, teaching aids, interactive whiteboard, Internet maturity model, teaching aids, second life, Web 2.0 tools and the like.



In the realm of learning a language, teachers are able to make interesting lessons that involve the use of videos, simulations and other animations. They also can follow a blended approach in which the usual classroom instruction is interspersed with online learning in order to offer a wider range of educational services.

Another benefit is that technology enhances social learning; it provides real time data, and promotes intercultural connection. This also enables a learner to access the global library from any geographical location. It is the way that aids the transformation of education that is usually one way to the more interactive that heightens the learning and retention aspect.

Conclusion:

This research comes to a conclusion that digital resources have caused a significant shift in English vocabulary learning and performance. The proliferation of technology has converted the traditional forms of learning into more dynamic, fun, and interactive ways. Language learning has become more interactive and innovative with such inclusions as mobile phone applications, online games, podcasts, e-dictionaries, and even multimedia resources to make learning vocabulary more appealing to students.

The key point in the improvement of learning modern vocabulary is the application of computers, the process of learning vocabulary is more effective, and keeping in mind the computer technology, the process is more fun for the students involved. However other aspects relevant to vocabulary practices are not in line with teaching or learning objectives regardless

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of the widespread use of technology in classrooms. For example, gamification is the use of game design techniques in a non-gaming system setting improving user behavior, engagement and retention through competition and rewards.

Digital tools improve the memorization of vocabulary by integrating visual, auditory, and kinaesthetic (physical) learning styles which encourage different senses at once a principle called multi-sensory learning. Because of the use of such tools all the time, spaced practice (spaced practice) concepts are not new and have been used for long by educators but they are typically difficult and impractical to apply. Hence the learners are more facilitated in terms of understanding the memory and use of English words whenever there is communication in terms of meaning-making.

Another point is that online education is beneficial in that it avails students with the flexibility to learn at their own pace and at the comfort of their convenience, overcoming the constraints of time and location. This ability encourages students' self-discipline, interest, and their habit of developing new knowledge throughout their lives. Any tech advances also go in favor of tutors who can reach more advanced tools for design of better lessons, control progress of learners, and give feedback almost instantly to learners right on time.

Moving on, it should be taken into account that according to the study, digital tools also contribute to the creation of environments for students' joint work. Several digital tools and services, such as online discussions, chat rooms, social networks, help students learn and improve additional languages. Through the application of those technologies, the students not only get accustomed to those languages but also apply them in a more advanced manner.

All in all, the use of electronic resources in the study of English foreign language has been indicated in increasing the retention of vocabulary as a very handy tool. When these tools are properly used, they do not only enhance language abilities but also enhance independence and efficacy of the learners. More so, such findings most compellingly stress the utility of the technology use as an assisting tool which enables learning and recall of the subject: enhance the rivalry in digital language education where students are reminding profiles of integration differences.

Outcomes of the study:

1. The new digital tools greatly facilitated the learners' work on problems over word meanings alongside with their retention.
2. Leadership towards gaming and using more interactive tools also increased learners' motivation and participation in tasks.
3. Texts, video games, and digital multimedia devices that were personalized to the learners' level and requirements helped in this regard.
4. Learners gained valuable skills of how to learn on their own as well as how to work independently.
5. In addition, teachers also used digital technology to keep track of the learners' progress and deliver timely feedback.
6. On the other hand, in a situation where only one person speaks, technology can inhibit communication though this is not the case when there is collaborative online learning.
7. In other general aspects, the practising learners and the teaching instructors did not exhibit any resistance in engaging language learning with devices.

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