

TEACHING STUDENTS DIFFERENT STRATEGIES OF MEMORIZING

The article highlights the idea of using methods of memorizing material in order to help students cope with it easier and make the process of memorizing simpler and more advanced. The article studies a number of memorizing methods that should be used while teaching foreign languages and other subjects.

Key words: memorization techniques, frequent training, memorization skills, effective learning environment, ability to retain new information

In the process of education, memorization plays a significant role in gaining and keeping knowledge in memory. While the traditional rote memorization technique has been widely used for decades, new approaches and techniques have emerged over the years, offering educators and students more effective ways to retain information. In this article, we explore various methods of memorization, discuss their effectiveness, and provide practical tips for educators to implement them in the classroom. By understanding the cognitive processes behind memory and employing a variety of memorization techniques, students' learning experience and retaining information can be more effective.

Memory is a complex cognitive function that involves encoding, storing, and retrieving information. According to cognitive psychology, there are different types of memory, including sensory memory, short-term memory, and long-term memory (Baddeley, 2000). Understanding how the memory systems work is essential for selecting the most appropriate memorization techniques.

The first step is encoding information – it refers to the process of transforming sensory input into a format that can be stored in the brain. Techniques that facilitate effective encoding include visualization, association, and elaboration. The next step is storage and retrieval: once information is encoded, it must be stored in memory and later retrieved. The ease with which we retrieve information depends on how well it was encoded and the techniques used to reinforce memory.

Traditional Methods of Memorization include: 1. Rote Memorization. This is one of the oldest and most commonly used techniques, where students repeat information until it becomes ingrained in their memory. While effective for memorizing simple facts, rote memorization is less effective for complex concepts that require deep understanding. 2. Mnemonics. Mnemonics are memory aids that help students remember information through associations. For example, using acronyms, rhymes, or visual images to connect information with something familiar can aid in recall. An example of a mnemonic is the combination of letters SASCOM which stand for Size, Age, Colour, Origin, Material – the order of adjectives to remember it easier. 3. The Method of Loci (Memory Palace). This ancient technique involves associating the information to be memorized with specific locations in a familiar place, such as a house or a journey. By mentally walking through the “palace” and retrieving the information linked to each location, students can improve memory recall.

With an understanding of how memory works, educators should introduce students to more advanced techniques that improve both retention and recall.

One of them is **Spaced Repetition**. Spaced repetition is a method of reviewing material at increasing intervals, based on the principle of the forgetting curve (Ebbinghaus, 1885). The forgetting curve hypothesizes the decline of memory retention in time. This curve shows how information is lost over time when there is no attempt to retain it. A typical graph of the forgetting curve shows that humans tend to halve their memory of newly learned knowledge in a matter of days or weeks unless they consciously renew the learned material. Herman Ebbinghaus hypothesized that the speed of forgetting depends on a number of factors such as the difficulty of the learned material (the fact how meaningful it is), its representation, and other physiological factors such as stress and sleep. He also stated that the basic forgetting rate differs little among individuals. He discovered that information is easier to recall when it is built upon things you already know, and the forgetting curve was flattened by every repetition. It appeared that by applying frequent training in learning, the information was solidified by repeated recalling. Herman Ebbinghaus' key finding was that repetition and reinforcement are critical for retaining information over time. Without reinforcement, people tend to forget up to 90% of what they have learned within a month. This underscores the importance of teachers developing effective strategies for retention and reinforcement in order to ensure that learning and development efforts are not wasted. The most typical question which is asked by students is how to learn new words better and more effectively. In our opinion, the right question to ask would rather be how not to forget information quickly, how to store it in memory. The problem is that our brain automatically deletes the information which it considers useless, namely the words we do not use after learning. Such information is

considered as unimportant and quickly disappears. The words that are not used, do not call any emotions or associations from personal experience, are not come across regularly just vanish from our memory. Our brain saves energy getting rid of them. Herman Ebbinghaus by means of his forgetting curve demonstrates that 40 per cent of information is lost in 20 minutes without revising it. In a day only about 30 per cent of it remains, in a week not more than 20 per cent is kept. This fact seems discouraging for those who strive to learn. But the positive news is that the process of forgetting can be slowed down if we plan the time of revising material correctly. Typically, it is considered that multiple rereading helps to store information, but in reality, it is not so. In such a way information is kept in short-term memory and can be quickly forgotten.

Later research also suggested that higher original learning can produce slower forgetting. Consequently – the more information was originally learned, the slower the forgetting rate would be. Reviewing material in the first 24 hours after learning information is the optimum time to actively recall the content and reset the forgetting curve. Knowing these facts can prevent students from just blaming their ‘poor memory’ for not remembering the material. The spaced repetition technique has been shown to significantly improve long-term retention by reinforcing information before it is forgotten. Educational tools such as flashcards and software like Anki use spaced repetition algorithms to optimize learning. Anki is a flashcard program that helps students spend more time on challenging material, and less on what they already know.

Another technique is **Active Recall**. Active recall involves retrieving information from memory rather than passively reviewing notes. If active recall is divided portions with pauses, our brain is more active and in such a way it strengthens its neuron connections. We should teach students that the first revision should be done in an hour, the second – in a day, the third – in a week, the fourth – in a month. Practically, after such active recall a new word stays in our memory forever. Also, we should actively explain that revision in the context is much more effective and helpful. We can take a new word as an example of memorizing. The first step is to check its correct pronunciation and spelling. It is a typical students’ mistake to try memorizing a new word without being sure of its correct pronunciation. In future it will prevent them from recognizing it on hearing. It is also a good idea to spell it several times. The second step is to understand the meaning of the words in different context – it often happens that the word may have different meanings in a different context. Its translation does not always help to give its complete understanding. In this respect GPT chat can be useful – instead of just using it to complete the task instead of them, because it does not finally help to get knowledge and passively perceive information, students can ask it to compose 5 different sentences with the new word in order to see how it can be used in different context. The third step is actualization of the word – students should imagine some situations in which they can use it. It is a good idea to use it in the situations from personal experience or in a funny situation which they can easily recall in future, in such a way memorizing the word. Studies have shown that actively engaging with the material improves retention (Roediger & Butler, 2011). Teachers can incorporate active recall by encouraging students to quiz themselves or participate in peer-led discussions.

Also, such method as **Visual Imagery** can be implemented. Visualization techniques, such as creating vivid mental images or “mental movies,” can improve memory. The method of loci, mentioned further, is an example of a visualization-based technique. The teacher’s task is to explain students its meaning and useful sides and encourage them to use it in their work.

The Method of Loci (Memory Palace)

This ancient technique, reportedly used by Greek orators, involves associating pieces of information with specific physical locations. Students mentally “walk through” these locations to retrieve stored data. This method is particularly effective for memorizing lists or sequences and is often used in memory championships today.

Mind Mapping and Organizational Tools

Mind maps are graphic tools that help organize information visually. Unlike linear note-taking, mind maps show the relationships among ideas using branches and colors. This can help students see the “big picture,” making connections among concepts more memorable. Mind maps are particularly useful for brainstorming, reviewing grammar, summarizing chapters, or preparing for exams. Some studies suggest that visually organized information is easier to recall than text alone.

Educators can train students to create their own mind maps using paper or digital tools like XMind, MindMeister, or even simple drawing software. Encouraging the use of mind maps in subjects like language learning, science, and history supports both critical thinking and retention.

Mind Mapping is not actually new, but we consider it quite effective. Mind maps are visual representations of information that help organize and structure knowledge. While learning grammar it often helps to graphically express the idea of tenses, which is already widely used. Also, by connecting related ideas with branches, students can better understand how concepts are interconnected, leading to improved recall.

A new word, but not a new idea has appeared recently – **Gamification**. Gamification incorporates elements of game design, such as rewards and competition, to motivate students and improve their memorization skills. By turning learning into a game, students become more engaged and motivated to retain new information. We cannot consider it a completely new method, though it had obtained some new features due to the use Educational Apps and Platforms: tools like Duolingo, Quizlet, and Anki which give wide variety of activities and students should be encouraged to use some in order make the process of learning more effective and interesting.

For educators, the key to helping students memorize new material lies in offering a variety of strategies. By understanding the cognitive science of memory and applying methods such as spaced repetition, active recall, and

visualization, teachers can create an effective learning environment. Additionally, incorporating technology and addressing cognitive factors like stress and sleep can further enhance memory retention. It is important for educators to consider individual learning styles and adapt their methods to suit the needs of their students.

Students should be explained that stress and anxiety can interfere with memory formation and retrieval. Very often, instead of learning the material systematically, in small portions, they try to cope with it, mistakenly trying to memorize huge amount of information at a time. Teachers' task is to explain the mechanism of memorizing to avoid such typical useless 'brain-storming'. Students should be taught to realize - if they cram for an exam the night before, they may remember the information well enough to pass the next day test, but within a week, they are likely to have forgotten much of what they learned. Learning not to waste what they have gained should be one of the priorities of the learning process in general. Also, students should realize that not enough sleep, which is also a typical feature of student' learning style leads only to worsening of their memorizing quality. Some students complain of feeling anxiety before speaking in public, which also adds to inability to remember the necessary material on time, creating some memory 'block'. It is essential for students to manage stress through relaxation techniques, such as mindfulness, meditation, practicing beforehand to enhance their ability to retain new information (Schwabe & Wolf, 2013).

Effective Teaching Practices

Teachers can support memorization in the classroom through a variety of practical methods:

- Breaking lessons into smaller, manageable segments to avoid cognitive overload.
- Incorporating frequent, low-stakes quizzes to reinforce active recall and reduce exam anxiety.
- Providing real-life examples and analogies to aid encoding and understanding.
- Encouraging peer teaching, where students explain material to each other.
- Scheduling regular review sessions, especially before cumulative assessments.
- Differentiating instruction to accommodate diverse learning styles—some students may respond better to visual tools, others to auditory or kinesthetic methods.

Moreover, students should be guided to build consistent study habits over time. Developing a study routine with scheduled breaks, regular reviews, and diverse techniques creates an optimal learning environment. Teachers should emphasize that memory is not fixed—it is a skill that can be developed with practice and the right strategies.

Every educator is concerned with the idea of helping students to cope with the immense amount of knowledge which they have to deal with nowadays. We should take into consideration that there are methods that are able to make the process of memorizing if not easy, but more available for students. We should not forget about teaching students not only scientific factual information, but the information about perceiving new material easier and in a more productive way.

Memorization is not merely about storing facts; it is about building a foundation for long-term understanding and critical thinking. Mnemonics – creating personal experience or just funny, illogical situations can wake up our memory and make it store and reproduce the necessary information better and with ease. We should explain that common repetition is not as effective as it may be expected. Rote learning (mechanical memorizing) is not very effective, it helps only to keep information in our short-term memory. Active recall practice (hidden prompts, interactive cards, interval recall) makes our brain be more active. Asking as many questions as possible is also very helpful in the process of memorizing information. By introducing students to a wide range of memorization strategies—from traditional mnemonics to advanced spaced repetition, active recall, surrounding themselves with the effective learning environment and gamification—educators empower them to become more independent, efficient, and confident learners. Furthermore, addressing factors like sleep, stress, and study habits reinforces the idea that effective learning is both a cognitive and emotional process. In today's fast-changing educational landscape, equipping students with these tools is more essential than ever.

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НАВЧАННЯ СТУДЕНТІВ РІЗНИХ СТРАТЕГІЙ ЗАПАМ'ЯТОВУВАННЯ

Стаття присвячена методам запам'ятовування навчального матеріалу, які застосовуються з метою полегшення його засвоєння студентами. Застосування методів запам'ятовування нової лексики, граматики, мовленнєвих структур та іншого навчального матеріалу мають полегшити процес навчання для студентів.

Ключові слова: *техніки запам'ятовування, частотне відпрацювання, навички запам'ятовування, ефективне навчальне середовище, здатність зберігати нову інформацію.*

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