INNOVATIVE WAYS OF SOLVING A PROBLEM OF USING MNEMONICS STRATEGIES TO IMPROVE PRIMARY STAGE PUPILS’ EFL VOCABULARY LEARNING

Abstract. In the article it is shown types of mnemonics strategies that teachers might employ. According to different researches, there are five classes of mnemonics: linguistic, spatial, visual, physical response and verbal methods. Linguistic mnemonics usually are understood as key methods. Spatial mnemonics include some spatial grouping and so called “finger methods”. These methods also
involve the ways which help to connect new concepts with some familiar place, a pattern or a script, which can help in the process of memorization of the material. Visual mnemonics help any person to make use of pictures or in visualizations them, to create some associations by the basic concept (in such a way there are symbolic, mnemonics, also, pictographic ones). The verbal mnemonics is used when the meaning of some stories, novels can help students to remember the information, combining with some methods, such as grouping or re-grouping, or providing semantic organization and story-telling, or building up narrative chains. Physical mnemonics take a place when the body parts help the person to remember, either by help of some movements or physical response.

In the paradigm of English Language Methodology, the formulation of definitions, which depend on mnemonic spheres of the person, it is mainly carried out by scripts or frames. The pedagogical and psychological mechanisms of quantification of any language do not allow the person to create a wide practice of giving the definitions, using scripts or frames. But with the help of the last ones, it is impossible to exclude the corresponding role of the language in the English Language Methodology.

**Keywords**: mnemonics strategies, linguistic mnemonics, spatial mnemonics, visual mnemonics, verbal mnemonics, physical mnemonics.

**Problem statement.** The person’s memory determines the use and the participation of previous experience in people’s natural or purposeful behavior. From this point of view, memory at the moment of fixation of the reaction of the person who perceives the information reproduces the activity in its full sense of the word (Murphy, Melandi & Bucci, 2021). This definition of the individual’s memory contains some explicit or hidden form of its main components, characteristics, signs and qualities of the behavior of the person, which are understood by us as fundamental frames of contemporary psychological knowledge, of explaining by us the person’s cognitive processes (Cover & King, 1978). According to this, the problem of use mnemonics strategies in the English Language Methodology is very actual.

**The purpose** of the article is to study innovative ways of solving a problem of using mnemonics strategies to improve primary stage pupils’ EFL vocabulary learning.

So, the objects of our research are: 1) to describe pedagogical and psychological researches of the person’s memory; 2) to show the ways of the development of a child’s main cognitive processes, including memory; 3) to describe the functions of memory; 4) to emphasize the problem of mnemonic sphere of the person within the paradigm of the Activity Approach; 5) to describe five classes of mnemonics: linguistic, spatial, visual, physical response and verbal methods; 6) to present the pedagogical and psychological mechanisms of quantification of any language, using scripts or frames, with the help of which it is impossible to exclude the corresponding role of the language in the English Language Methodology.

**The main research material.** Pedagogical and psychological researches of memory have to be included into the context of different scientific paradigm, but we have our own point of view. At the same time, it is proof, that a person is the subject
of study either as a product of biological development or as an ordinary individual with his/her own genetic program. However, it is not easy to compare the knowledge obtained during the study of the phenomena of “memory”. Also, we’ve to study how mnemonic abilities influence and such complex processes as learning and teaching (Berninger & Abbott, 2010).

From the pedagogical and psychological point of view, memory plays the role of some intensifier of various characteristics, so, it realizes mnemonic abilities. These ones are the most important qualities of the person, because they influence the speed, accuracy and strength of individual memorization (Bucci, Maskit & Murphy, 2016). Having been the complex of mental abilities, memory, interacting some different functions, permeates other mental processes. So, memory is a part of the structure of intelligence, the person’s experience and knowledge, which are not free from the great influence of culture, history and the life of the individual (Adachi & Willoughby, 2015). At the same time, memory displays its own specific laws, and this process constitutes a separate field of scientific research (by some stability, dynamics, accuracy, volume and other parameters of memory).

However, the level of memory itself has played the dominant role from the birth of the person. Without diminishing the importance of basic factors, we’ve to note that children are born with different mnemonic abilities, of high and low levels. But not the last role is played by the specially created environment in the family, by public and educational establishments (Conners, 2009).

The development of a child’s main cognitive processes, including memory, in preschool age can be spontaneous and controlled, organized and disorganized, and the level of intelligence having been achieved by a child up to 6-7 years old, as well as the degree of his/her readiness to study at school, depends significantly on how much information or informative frames in preschool institutions was perceived out during the previous three or four years (Cui, Wang & Zhong, 2021). These years make a significant contribution to the cognitive development of children. It is no coincidence that the leading type of the person’s activity at this age is a game, which is complemented, of course, by other types of activity that affect the child’s development, including the process of communication (Ehri, Nunes, Willows, Schuster, Yaghoub-Zadeh & Shanahan, 2001).

In the early age children have great opportunities for improving cognitive processes, primarily perception through the formation of sensory actions, consciously regulated by the aim of transforming perceptual activity in order to build adequate images of it. In conjunction with the development of perception in preschool age there is a process of improving the child’s memory (Guevara Erra, Mateos, Wennberg, & Velazquez, 2016). But if the possibilities for the development at this age are more or less limited than perception, they are much wider or more global than memory is. Its improvement is for children the most important, because preschoolers can proceed simultaneously along several different characteristics (El-Zawawy, 2021). The first characteristic is actualizing the processes of memorization of the person. The second one is the transformation of the child’s memory from direct to indirect scripts. The third characteristic shows the development of means and techniques of both memorization and attention.
By the end of preschool childhood, the person’s memory is separated into a special independently controlled mental function of the child, which he/she can control from one degree to another one. In the elder preschool age, due to the presentation of special mnemonic tasks to other children, the transition of psychic processes to arbitrary memory takes a place. The more tasks preschoolers display, depend on their communication, the activities. The faster their memory turns from involuntary to voluntary, the more developed the mnemonic sphere of the person is. At the same time, mnemonic actions are separated into some special groups among other types of actions, which are performed in the connection with the implementation of this or that productive activity (Mykhalchuk & Ivashkevych, 2019). Mnemonics are actions, which have the aim of memorizing, saving and reproducing different types of information. For the development of the child’s voluntary memory, it is important to catch in time and make the most degree of the person’s desire to remember or recall something (Mykhalchuk & Khupavsheva, 2020).

The process of improving children’s memory is connected with the use of mental operations of analysis, synthesis, comparison, generalization, establishment of meaningful connections in the processes of memorizing and reproducing material. We can say that the improvement of the child’s memory occurs simultaneously with the improvement of his/her mental activity. In such a way it directly dependents on it. It should also be noted that in accordance with the periodization of mental development proposed by scientists (Dubovyk, Mytnyk, Mykhalchuk, Rashkovska & Nabochuk, 2022), each age period, in addition to concrete psychological neoplasms, is also characterized by some dominant function.

In the researches of scientists (Cheng, Zhang, Wu, Liu & Li, 2016), the central function of preschool age is memory. The difference between the memory of a child and an adult, based on the contemporary researches, is not simply or usual natural “strengthening” of it, but from the point of view of “cultural acquisition” more and more important are new techniques. It we’d see from the side of the ability to use conditional characteristics, with the help of which for the child it is possible to increase the capabilities of its memory indirectly for many times (Astle & Scerif, 2011).

To begin with, we’d note, that there are some different types of memory: visual, auditory, tactile, etc. Moreover, visual memory prevails in the early childhood, that is, what the child sees, he/she remembers faster and better. But it is worth also remembering the main characteristics of preschool memory: the child remembers quickly and forgets just as quickly as it is possible (without repetition and doing a lot of exercises) in order to perceive some new material (Alderson, Nieminen & Huhta, 2016). Thus, the memory of preschoolers is “plastic” and needs constant training. Also, it should be emphasized that it is the purposeful development of mnemonic activity that ensures the activity of memory processes (we mean memorization and reproduction) (Carhart-Harris, Leech, Hellyer, Shanahan, Feilding, Tagliazucchi, Chialvo & Nutt, 2014).

The functions of the memory also have mentioned in this article. They are of great importance when a child enters school. In order to be able to learn the school program well, as for the child it is necessary to note that his/her memory becomes arbitrary.
In such a case the child has various effective means for memorizing, saving and reproducing educational material. Also, we’ve to emphasize that the development of memory, its improvement during preschool childhood is one of the important tasks facing educators and psychologists working in preschool establishments (Dubovyk, Mytnyk, Mykhalchuk, Ivashkevych & Hupavtseva, 2020).

It is also known that a lot of attention was and is being paid. It has been paid to the problem of memory development in Ukrainian and foreign Pedagogics and Psychology (Mykhalchuk & Bihunova, 2019). Although there are significantly some researches, which deal with the study of preschool age than to the research of memory of schoolchildren. In a great number of pedagogical and psychological researches, the performance of memory of preschool children was compared with the memory of pupils of school age and in the age of 7-9 years old (Mykhalchuk & Kryshevych, 2019). The empirical researches having been done in this direction were carried out by Gillet in Ancient times. He organized his research on himself and his two-year-old son. Dekroli and Degan, as well as Ilych, who investigated the growth of memory capacity when children reproduced meaningful drawings, displayed the same comparative study of memory productivity of children of primary school and junior school age.

Among some researches, which deal with the study of memory of pupils of primary school, it is necessary to point out some scientists (Mykhalchuk, Bihunova, Fridrikh & Vietrova, 2021), who investigated age differences in the performance by pupils of memorizing meaningless syllables and meaningful words. These scientists also showed the stages of the development of direct and indirect memorization of pupils of different age groups.

In a comprehensive study by scientists (Pimperton & Nation, 2010), the productivity of two types of mnemonics, voluntary and involuntary one, was compared. Again, the scientists talked about the subjects of different ages, including preschool children. The study of the process of the formation of mnemonic actions of children of preschool age became the object of a lot of scientific researches (Shiva Ram, Bhardwaj & Phani Krishna, 2017), who studied the differences of preschool children’s memorization of items having been offered one by one and in pairs (in the latter case, in such a combination that allowed establishing semantic connections between the numbers of each pair).

In the researches of scientists (Pepperell, 2018) the subject of study was the effect, which emphasizes on the memory volume of the grouping of objects with the appropriate generalizing word. In the researches (Mykhalchuk, Ivashkevych, Nohachevska, Nabochuk & Voitenko, 2021) the development of memorization of visual and verbal material was compared. Also, the researches (Hogan, Adlof & Alonzo, 2014) had the aim to determine the role of language mediation in the process of memorization of preschool children. Different studies by researches (Drigas & Karyotaki, 2017) deal with the qualitative analysis of the content of reenactments of children in preschool age (including fairy tales). Some other researches (Dale & Duran, 2011) showed basic differences in memorizing by different types of connected material (poems, sayings, fairy tales).

It was common to all of these researches the predominant study of the productive side of memory of the person, such as some basic quantitative indicators of its
productivity. Much less attention was paid to the qualitative nature of age and individual differences in the very processes of memorization and reproduction by their dependence on the specific conditions in which they are studied (Chen, 2016).

The main studies of memory functions in familiar or similar conditions are, as we see, productive ones. These studies note that a person’s memory is closely related to his/her motivational sphere, his/her needs, emotions, attitudes. Scientists’ opinion is correct, according to the specific features of memory, which the authors called the unifying force that glues any previous conditions compared with the next one (Arrington, Kulesz, Francis, Fletcher & Barnes, 2014). Interpreting this statement in other words, we can note: the preservation of everything (we mean any information), accumulated from verbally structured forms to pictorial plans and sensory signs, preserves some basic specific differences of mnemonic sphere of the person. In other words, if it is one of the conditions for “the unity” of the psyche of the individual, for the harmonization of his/her personal structure.

Thus, a wide range of problems, approaches and methods of studying memory allows us to say that memory is not autonomous, but it is complexly organized, has deep roots in evolution, and it is characterized by the continuity of its development. It acts as a spatio-temporal management of the experience of a person as a “living, natural system” (Engle, 2002).

Analyzing the history of the study of memory, we should note that the peak of such kind of researches comes to the 50s and 60s of our centuries. In advance, several main directions can be observed in different researches. One of them deals with the general idea of the isolated nature of the memory’s function, of some “pure” and unified nature of it. It comes from Spearman, who showed that memory is based on the general ability of the person to remember any information. Data began to accumulate, allowing us to talk about the multifactorial structure of the memory. The further development of researches on memory is associated with a great change in ideas about its isolated nature. It was shown that the person’s memory is connected with other mental processes, primarily with thinking, perception, attention, etc.

The consideration of the problem of mnemonic sphere of the person within the paradigm of the Activity Approach mainly associated with the Ukrainian researchers, and it is of great importance. This made us possible to study the role of memory functioning in a real life of the person. The researches (Mykhalchuk, Zlyvkov, Lukomska, Nabochuk & Khrystych, 2022) showed the influence of mnemonic processing methods on memorization results. This indicates that memory is not a passive, but an active process that functions in deep relationships with other processes, and, first of all, with thinking, including a wider range of results of cognitive and practical human activity. However, according to this Approach, a situation had been arisen when the person’s memory was dissolved into other processes and activities, having been completely detached from the special characteristics of the person’s brain. All these records and preserve general information, and began to lose its specificity. Indeed, it is worth to agree with the opinion of a number of authors who believe that the more it becomes known about the methods of managing memory, the more difficult it is to understand what memory actually is.
In the scientific literature it was shown that there were many types of mnemonic strategies that teachers might employ. According to our researches, there are five classes of mnemonics: linguistic, spatial, visual, physical response and verbal methods. **Linguistic mnemonics** usually are understood as key methods. They also involve associating some information with new concepts, with familiar words and/or phrases. These concepts, words, word combinations and sentences help people to remember them quickly. There are **spatial mnemonics**, which include some spatial grouping and so called “finger methods”. These methods also involve the ways which help to connect new concepts with some familiar place, a pattern or a script, which can help in the process of memorization of the material. There are **visual mnemonics**. They help the person to make use of pictures or in visualizations them, to create some associations by the basic concept (in such a way there are symbolic, mnemonics, also, pictographic ones). **The verbal mnemonics** is used when the meaning of some stories, novels can help students to remember the information, combining with some methods, such as grouping or re-grouping, or providing semantic organization and story-telling, or building up narrative chains. **Physical mnemonics** take a place when the body parts help the person to remember, either by help of some movements or physical response.

These mnemonics, which are on Fig. 1, all these strategies. The sense and the meaning of any scientific definition presupposes the solution of two basic problems, which are emphasized on the localization of the ontological boundaries of the object having been determined (well-explored).

The descriptions of these boundaries are known as some specific, assumed characteristics, which in a great degree reflect a composition, a structure and functionality of the components, genesis, interrelations of the mnemonic sphere with other objects (these objects also influence the process of the remembering of information). In the paradigm of English Language Methodology, the formulation of definitions, which depend on mnemonic spheres of the person, it is mainly carried out by scripts or frames. Also, the pedagogical and psychological mechanisms of quantification of any language do not allow the person to create a wide practice of giving the definitions, using scripts or frames. But with the help of the last ones, it is impossible to exclude the corresponding role of the language in the English Language Methodology.
Fig. 1. Different types of mnemonic strategies

Conclusions and perspectives of further research. These types of mnemonic strategies cause the validity problems of verbal definitions, the evidence of which is actualized when pupils translate texts into different languages (for example, from English into Ukrainian or from Ukrainian into Russian). At the same time, the unification of the scientific language also cannot help us to solve a problem. It is, first of all, because there are a lot of all-linguistic features, like negotiation of the language, when it is difficult for pupils to study the language.

If we talk about mnemonic strategies, we’ll find some useful examples which are valuable for the whole system of the English language. When it is necessary for us to understand some concepts, it is able for us to understand them by some not important characteristics. Also, we’ll define them not only by their positive content, but negatively, by their relations with other definitions or terms of the English language system. These basic characteristics of some type of mnemonic strategies are unique ones (other concepts do not have such characteristics as these ones have). We’ll investigate them in further our researches.
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ІННОВАЦІЙНІ ШЛЯХИ РОЗВ’ЯЗАННЯ ПРОБЛЕМИ ВИКОРИСТАННЯ СТРАТЕГІЙ МНЕМОТЕХІНИ ДЛЯ ПОКРАЩЕННЯ ВИВЧЕННЯ СЛОВНИКОВОГО ЗАПАСУ УЧНЯМИ ПОЧАТКОВИХ КЛАСІВ

Михальчук Наталія
доктор психологічних наук,
професор, завідувачка кафедри практики англійської мови
та методики викладання
Рівненського державного гуманітарного університету,
м. Рівне, Україна
ORCID: 0000-0003-0492-9450
e-mail: natasha1273@ukr.net

Івашкевич Ернест
кандидат психологічних наук,
doцент кафедри практики англійської мови
та методики викладання, перекладач
Рівненського державного гуманітарного університету,
м. Рівне, Україна
ORCID: 0000-0001-7219-1086
e-mail: ivashkevych.ee@gmail.com

Кваснецька Наталія
кандидат педагогічних наук,
doцент, доцент кафедри практики англійської мови
та методики викладання
Анотація. У статті розглянуто інноваційні шляхи розв’язання проблеми виростання стратегій мнемотехніки для покращення вивчення словникового запасу учнями початкових класів.

Представлено п’ять основних груп мнемотехніки: лінгвістична, просторова, візуальна, вербальна, техніка актуалізації фізичної активності. Лінгвістична мнемотехніка передбачає асоціювання певної інформації з новими поняттями, знайомими словами та/або фразами. Візуальна мнемотехніка допомагає школярам використовувати малюнки або за умов їх візуалізації, або створювати певні асоціації за основним поняттям (такими є символічні, мнемотехнічні, а також піктографічні). Вербальна мнемоніка використовується, коли зміст деяких історій, розповідей може допомогти учням запам’ятати інформацію, поєднуючи її з деякими методами, такими як групування чи перегрупування, або забезпечуючи семантичну організацію та розповідь, або створюючи ланцюжки оповідей. Техніка актуалізації фізичної активності має місце, коли частини тіла допомагають учневі запам’ятати, або за допомогою деяких рухів, або певної фізичної реакції.

Ці мнемотехніки передбачають розв’язання двох основних проблем, які акцентують увагу на локалізації онтологічних меж визначеного (добре дослідженого) об’єкта. Описи цих меж відомі як певні, довільні характеристики, що відображають склад, структуру і функціональність компонентів, генезис, взаємозв’язки мнемічної сфери особистості з іншими об’єктами (ці об’єкти також безпосередньо впливають на процес запам’ятовування інформації). У парадигмі методики навчання англійської мови формулювання визначень, які залежать від мнемічних сфер особистості, в основному здійснюється за допомогою скриптів або фреймів.

Ключові слова: мнемічні стратегії, лінгвістична мнемотехніка, просторова мнемотехніка, візуальна мнемотехніка, вербальна мнемотехніка, техніка актуалізації фізичної активності.

Стаття надійшла до редакції 25.04.2023 р.