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The role of mnemonics in the process of L1 and L2 language learning

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THE ROLE OF MNEMONICS IN THE PROCESS OF L1 AND L2 LANGUAGE LEARNING

INTRODUCTION

According to the Rieder-Bünemann (2012, p. 2291) *mnemotechnics* refer to a group of mnemonic devices, that is, tools and techniques which aid memorization. These techniques commonly rely on associations relating the items to be remembered to other entities, thus making them easier to store and recall. Buzan (1991, p. 18) enumerated some basic principles behind any mnemonic system which might improve all aspects of learning. Among such principles he listed: senses, movement, association, structure, imagery, positive images and imagination. Senses were mentioned as it is believed that stimulating vision, hearing, sound rhythm, smell, taste and touch helps in creating and remembering images. In case of movement it was shown that moving images can capture one's attention while association, that is linking the new information to the already existing one, aids memorization process. The same time by implementing structure, order or sequence it is easier to access any piece of information learned. Imagery aids remembering by using personal references, color or symbolism and imagination, especially exaggeration of size, shape or sound enhance images in memory what might also contribute to memorization process. It needs to be remembered that the brain has a tendency to avoid negative associations, therefore positive images should be used at all times (Turner, 2001, p. 230). Some typical tasks using mentioned above principles could be using of acronyms (an invented combination of letters with each letter acting as a cue to an idea one wants to remember), acrostics (an invented sentence where the first letter of each word is a cue to an idea), loci method (imagining placing the items one wants to remember in specific locations a given person is familiar with), or chaining (that is creating a story where each word or idea that is to be remembered will cue the next idea to be recalled). With regard to second-language learning, various mnemotechnics were employed as second-language learning strategies to enable learners to remember and retrieve language items (Rieder-Bünemann, 2012, p. 2291). Some of these strategies involve *creating mental links* between language items, like categorizing words into meaningful units, while others involve *applying images* (e.g.:

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the method of loci: using a set of locations for remembering a sequence of words) and *sounds* (e.g.: using rhymes to remember difficult spellings) as well as employing action and using physical response. Another quite popular mnemonic method is the keyword method that is based on selecting the foreign word to be memorized and identifying an English word that is similar in sound to the foreign one and creating an image that involves the key word with the English meaning of the foreign word. As it could be noticed mnemotechnics might vary not only depending on the type of the information that needs to be memorized but also on the type of the language in which this memorization is to take place (L1 vs. L2). Below we are to present some neurological and pedagogical assumptions underlying the construct as well as studies that researched the use of the mnemonic devices in acquisition of basic literacy skills in native and non-native languages.

NEUROLOGICAL AND PEDAGOGICAL ASSUMPTIONS UNDERLYING MNEMONICS

Studies on functional hemispheric asymmetry of the brain were stimulated by the research of Geschwind and Levitsky (1968), which provided evidence of an asymmetry in brain structure. This asymmetry correlated with the well-established functional asymmetry and dominance of the left hemisphere for language (Watkins, Gadian & Vargha-Khadem, 1999, p. 1216). Neuroimaging and electrophysiological investigations provided additional confirmation that the hemispheres were differentially specialized for global and local processing. The results of most studies indicated a right hemisphere superiority in processing a global shape and a left hemisphere superiority in processing local details (Senderecka, 2007). Senderecka (2007, p. 149) notes that hemispheres are not specialized to execute distinct cognitive functions (for example linguistic vs. spatial) but they rather differ in their ability and efficiency to perform definite cognitive processes. Hannaford (1997, p. 20) described these differences in accordance to two hemispheric dominance patterns of: logic and gestalt. Logic hemisphere, usually the left one, was described as logical, linear and sequential. In contrast, gestalt hemisphere, usually the right one, was presented as intuitive, random and spontaneous (Hannaford, 1997). Introduced idea of dominance profiles that shape the way one thinks and acts can supply information about how we access, assimilate and process sensory information and from there, how we respond to and express new learning. In general terms, students who have dominant right hemisphere and are random, intuitive and divergent thinkers are disadvantaged when lessons are arranged in a logical, sequential manner. At the same time, students with a dominant left hemisphere, who prefer to process information sequential have a considerable advantage while acquiring knowledge during lessons where reading, writing and listening, primarily, although not exclusively left brain activities, are the staple learning tasks (Hughes & Vass, 2005, p. 157). It is important to mention

that described above language learning tasks are typical not only for the native language (L1) lessons but are also, even more frequently, applied in the second language (L2) classrooms, what puts right hemisphere dominance students even in greater disadvantage. However, according to Hughes and Vass (2005, p. 159), all types of learners, irrespective of hemispheric dominance, will be required to understand both an overview and the detail of a topic in order to be able to understand it. The issue here is about the various ways that individuals will choose to arrive at the endpoint which is an acquisition of a given aspect or skill. Teachers need a range of strategies at their disposal in order to cater for different learning preference among their students. Authors claim that:

By consciously providing variety and choice in the learning activities that we employ in the classroom, we significantly increase the choices of ensuring that all students have regular opportunities to work in their preferred learning style (Hughes & Vass, 2005, p. 159).

It is of crucial importance to remember that in two hemispheres of the neo-cortex do not work in isolation, as they are linked together and that people learn best when both hemispheres communicate with each other (Hughes & Vass, 2005, p. 159). Skibaska (2010) suggests that while memorizing new material activities based both on logic as well as creativity should be used as learning is enhanced when both sides of the brain are involved in the very process. This allows us to work or think holistically, both hemispheres simultaneously engaged, yet processing the information in a very different manner. According to O'Brien (1993), one of the possible type of techniques that could be used for effective implementation of both logic and creativity, and as a result, involvement of both hemispheres, could be mnemotechnics.

THE ROLE OF MNEMONICS IN THE L1 AND L2 LANGUAGE LEARNING

THE ROLE OF MNEMONICS IN THE L1 LANGUAGE LEARNING

Learning to read requires the mastery of a collection of complex skills. First, the knowledge of morphology must be acquired. Then, orthographic symbols must be understood as the labels, spelling, that can be mapped onto sounds. Moreover, an understanding of phonetics is a vital, but by itself insufficient, tool for decoding words. In alphabetic languages with deep orthographies, such as English or French, graphemephoneme combinations are variable, with English having the highest degree of "irregular" representation among alphabetic languages, at more than a thousand possible letter combinations used to represent the 42 sounds of the language. Reading, particularly in languages with deep orthographies, therefore involves the use of supplementary strategies in addition to the phonological decoding of symbols into

sounds (OECD, 2007, p. 84). Mnemonic strategies were found to be very successful in the L1 reading and spelling acquisition. An example of using such mnemonic activities in the L1 early education could be the program entitled *Uncovering The Logic of English* designed by Eide (2011) which introduces phonograms and spelling rules that explain 98% of English words. This program was based on phonograms, that are sound pictures, which are introduced at early stage of acquisition of L1 literacy skills, in this case English. It was designed for kindergarten and lower primary school students. Longitudinal study showed that after 65 hours of instruction with the use of the method, the percentage of students who were assigned below thirtieth percentile as far as literacy skills are concerned dropped from 46% to 7% (Eide, 2011, p. 274). Another very interesting study by Skibska (2012a, pp. 195–197) showed that implementation of the mnemonics, designed by the author (Skibska 2012b, pp. 4–72), in the experimental group of primary school students at the very early stage of reading, writing and spelling acquisition in L1 Polish, significantly improved their performance on those tasks after the period of eight months during which the experiment took place. In the researched group of students clear differences emerged between the control and experimental group as far as reading similar letters in isolation, in syllables and in words as well as in writing those letters in words and whole sentences were concerned. The author postulates that implementation of the mnemotechnics while introducing writing and reading might not only help young learners in acquisition of these skills but also boost their motivation and create friendly atmosphere during the language classes. Examples presented above considered acquisition of basic literacy skills in the native language. Below we are to look at the implementation of mnemonics in the process of acquiring a second language.

THE ROLE OF MNEMONICS IN THE L2 LANGUAGE LEARNING

The use of mnemonic devices in foreign language vocabulary learning was supported by a number of research which was largely inspired by Atkinson (1972, 1975) and Atkinson and Raugh (1975). One of the most studied mnemonic techniques is the keyword method, in which the foreign word is remembered by being linked to a keyword, a sound-alike native word (the acoustic link), through an interactive image that involves both the foreign word and the native word (the imagery link) (c.f.: Yongqi Gu, 2003). The majority of empirical studies that researched mnemonics and their application in the L2 classroom pointed to the fact that the keyword method is superior to almost all other methods tested (Yongqi Gu, 2003). Below we are to present some current research findings concerning the use of mnemotechnics in L2 language learning context.

The study by Sagarra and Alba (2006, p. 228) investigated the effectiveness of three methods of learning vocabulary among 778 beginning second language (L2) learners. Among researched three methods were: rote memorization that consisted

of memorizing the first language (L1) translation of a new L2 word by rehearsal, semantic mapping display of L1 words conceptually related to the L2 word in a diagram and the keyword method that involved associating the novel L2 word with an L1 keyword that is acoustically or orthographically similar. The results revealed that vocabulary learning techniques requiring deeper processing through form and meaning associations (i.e.: the keyword method) yield the best retention. In addition, rote memorization of L1–L2 equivalents was more effective than creating multiple meaning associations (i.e.: semantic mapping). It was suggested by the authors that using the keyword method with phonological keywords and direct L1 keyword-translation links in the classroom might lead to better L2 vocabulary learning at early stages of acquisition. Barcroft (2009, p. 74) found that among the informants of his study scored significantly higher while using mnemonic technique and L2 – picture association over L2–L1 translation and repetition. A significant positive correlation was also observed between the number of strategies used and vocabulary recall. Study by Avila and Sadoski (1996) that used Spanish keywords to acquire English vocabulary. Sixty-three fifth-grade limited English proficiency students learned the definitions of 10 English words either by the keyword method or by control instructions emphasizing direct translation and memory (Avila & Sadoski, 1996, p. 379). Results showed that the keyword method produced superior recall and comprehension both immediately and after one week. Results further demonstrated that the keyword method was readily adaptable to English as a Second Language (ESL) classrooms.

CONCLUSIONS

The aim of the present article was to present a short overview of the research concerning the use of mnemotechnics in both L1 and L2 language learning. Presented outcomes point to the fact that implementation of the mnemonics might be very beneficial, especially when it comes to acquisition of literacy skills in the first language and later on foreign language learning. Mnemonics were said to incorporate both logic and creativity into the classroom setting aiding language acquisition among right and left hemisphere dominant students. It is of crucial importance, as students who have right hemisphere dominance and are random, intuitive and divergent thinkers are disadvantaged when lessons are arranged in a logical, sequential manner. By introducing mnemonics into the language classroom we cater for different language learning preferences and both type of hemisphere dominant learners. This will allow our students to exercise holistic thinking with, simultaneous engagement of both hemispheres.

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THE ROLE OF MNEMONICS IN THE PROCESS OF L1 AND L2 LANGUAGE LEARNING

Keywords: mnemonics, L1, L2 ,language learning, functional hemispheric asymmetry

Abstract: The present article aims to present an overview of the possible ways of implementing the mnemotechnics in the process of L1 and L2 learning. We are to focus on different approaches and techniques that were researched while acquiring literacy skills in the L1 classroom settings as well as while leaning a foreign language. It is postulated that this particular method might facilitate language learning process among majority of students as it addresses both type of hemisphere dominant learners.

ROLA MNEMOTECHNIK W PROCESIE UCZENIA SIĘ JĘZYKA MACIERZYSTEGO I OBCEGO

Słowa kluczowe: mnemotechniki, język macierzysty, język obcy, nauka języka, asymetria funkcjonalna mózgu

Streszczenie: W artykule przedstawiono przegląd różnych mnemotechnik oraz ich możliwe użycie podczas nauczania języka macierzystego oraz obcego. Autorka skupia się przede wszystkim na prezentacji różnorodnych badań związanych z wprowadzaniem mnemotechnik jako czynnika optymalizującego nabywanie przez uczniów umiejętności czytania i pisania w języku macierzystym oraz w przyswajaniu języka obcego.