Psychology and language:Contribution of Language and Memory to SLA Education

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Abstract

In order to provide a foundation for comprehending the various problematic factors that have the potential to influence a person's second language acquisition (SLA), this article presents a research narrative on working memory (WM).Working memory has been found to play a significant role in new word acquisition as well as a more comprehensive measure of language acquisition.According to Daneman and Green (1986), it is a significant factor in determining how easily elementary school students deduce a word's meaning from its context.Daneman and Green also contend that memory cannot directly facilitate word growth, noting that readers use context to make sense of partially known words.There is evidence to support the role of working memory in foreign language acquisition, and the literature provides convincing evidence of the importance of working memory for the comprehension and acquisition of first languages.

Keywords: *Second Languange Acquisition, Language, Working Memory, Languange Development.*

INTRODUCTION

Language is the method of expressing ideas and emotions in the form of signs and symbols (Amelia, 2021b). These signs and symbols are used to encode and decode the information (Fakhrurozi & Puspita, 2021). There are many languages spoken in the world (Kuswoyo et al., 2020). The first language learned by a baby is his or her mother tongue (Pranoto, 2021). It is the language, which he or she listens to from his or her birth (Fithratullah, 2019). Any other language learned or acquired is known as the second language (Al Falaq & Puspita, 2021). Second language acquisition (EWK, 2018), or SLA, has two meanings (Asia & Samanik, 2018). In a general sense it is a term to describe learning a second language (Ngestirosa et al., 2020). More specifically, it is the name of the theory of the process by which we acquire - or pick up - a second language (Samanik, 2018). This is mainly a subconscious process which happens while we focus on communication (Fithratullah, 2021). It can be compared with second language learning (F. M. Sari & Putri, 2019), which describes how formal language education helps us learn language through more conscious processes (Setiawan et al., n.d.).

Implications for the language classroom include the ideas that the teacher (K. Sari & Pranoto, 2021), can create contexts for communication (Aminatun, Muliyah, et al., 2021), which facilitate acquisition (Istiani & Puspita, 2020), that there is a natural order of

acquisition of language (Kardiansyah, 2019), that there are affective filters which inhibit acquisition (Qomariah & Sucipto, 2021), especially for adults, and that comprehensible input is very important (Kuswoyo et al., 2021). The second and assesment language has have become part of the school curriculum (Suprayogi, Samanik, & Chaniago, 2021), and education systems in many countries (Purwaningsih & Gulö, 2021), with many schools require them to take at least one second subjects, leading to an increase in the number of a person who can speak two or more languages (Isnaini & Aminatun, 2021). Therefore, what makes second language acquisition (SLA) and being multilingual is highly appreciated? There are many known social benefits of SLA (Aminatun, 2021), where fluent in other languages opens up wider job opportunities (Utami et al., 2021), and support better (Suprayogi, Pranoto, et al., 2021).

LITERATURE REVIEW

Communication with people from other cultural backgrounds. moreover, research also shows that there are cognitive benefits SLA (Candra & Qodriani, 2019), where it can improve problem solving skills (Wahyudin & Sari, 2018), control attention and act as a form of cognitive reserve in delaying the onset of dementia (Kardiansyah & Salam, 2020). Because need to understand grammatical structures and remember vocabulary to speak any language (Suprayogi, Samanik, Novanti, et al., 2021), working memory (WM) capacity may be important in SLA (E. Putri & Sari, 2020), where the simultaneous disclosure of two or more language can generate larger WM requests, so WM (Working Memory) capacity can be increased in the SLA process, serves as a cognitive benefit.

Working memory is generally understood as a limited-capacity processing and storage system that is necessary for carrying out a wide range of cognitive tasks (Baddeley, 2003). Working memory capacity is defined as the ability to store information and manipulate it simultaneously (Amelia & Daud, 2020). There is a massive amount of information that comes into our sensory memory every day. however, it is impossible to process all of it at the same time. Some information is selected and passed along into working memory to be processed. Therefore, working memory is the sum of the information temporarily stored in human consciousness and all online processing (Aminatun, Ayu, et al., 2021).

Geography of the brain

1.Up vs down

The upper surface of the brain is made up of 'gray matter' (i.e. its color when exposed to air) known as the cortex (or cortical area) (Qodriani & Wijana, 2021). It deals with many more complex operations, including making connections with stored information, analyzing input and controlling sophisticated muscle movements (Qodriani, 2021). Beneath it is the 'white matter' sub-cortex, which is mainly nerve cell fibers. In general, the lower part of the brain is responsible for reflex actions (Puspita, 2021), controlling functions such as breathing and heart rate. The cerebellum at the base of the brain has an important role in coordinating various muscle movements that have become highly automatic.

2 Left vs right

The brain is divided into two hemispheres, one on the left (from the point of view of the owner of the brain) and one on the right (Suprayogi & Novanti, 2021). They are joined by a complex network of neural connections known as the corpus callosum. The left hemisphere controls movement and sensation on the right side of the body while the right hemisphere connects to the left side (Suprayogi & Pranoto, 2020). Generalization is great, the left hemisphere in most individuals is associated with analytic processing and symbolization, while the right is associated with perceptual and spatial representations.

3 Front vs back

The outer surface of the brain is marked by ridges (gyri) and valleys (sulci). It serves to mark the four main regions in each hemisphere, known as lobes. They are the frontal lobe in front, the temporal lobe running from front to back and the occipital and parietal lobes behind (Puspita & Amelia, 2020).

Natural Language Processing

NLP combines computational linguistics—rules-based modeling of human language—with statistical models, machine learning, and deep learning (F. M. Sari & Wahyudin, 2019b). Together, these technologies allow computers to process human language in the form of text or voice data and 'understand' the full meaning, complete with the intent and sentiment of the speaker or writer (Amelia, 2021a).

NLP also means language processing that works when humans produce or understand language. It is thought that humans usually use all of these levels because each level conveys a different kind of meaning (N. R. Putri & Sari, 2021). But different NLP systems utilize different levels, or combinations of levels of linguistic analysis, and this is evident in the differences among the various applications of NLP. It also causes a lot of confusion on the part of non-specialists about what NLP really is, as systems using this subset of levels of analysis can be said to be NLP-based systems. The difference between them, therefore, may actually be whether the system uses 'weak' NLP or 'strong' NLP (Kasih, 2018).

Second language Acquisition
Second language acquisition (SLA), sometimes called second language learning otherwise referred to as L2 acquisition, is the process by which people learn a second language. Second language acquisition is also a discipline devoted to studying the process (F. M. Sari & Wahyudin, 2019a). The field of second language is considered by some but everyone to be a sub-discipline of applied linguistics but also receives attention from various other disciplines, such as psychology and education. A central theme in SLA (Suprayogi & Eko, 2020).

METHOD

This study use qualitative descriptive research generates data that describe the 'who, what, and where of events or experiences' from a subjective perspective, Qualitative and descriptive research methods have been very common procedures for conducting research in many disciplines, including education, psychology, and social sciences. These types of

research have also begun to be increasingly used in the field of second language teaching and learning. The interest in such methods, particularly in qualitative research, is motivated in part by the recognition that L2 teaching and learning is complex

RESULTS AND DISCUSSION

This paper has described a theoretical perspective on WM and considered its influence on the SLA, in terms of conditions, processes, and outcomes. In this discussion, the researcher looks at seeing WM work to help someone accept both properly and appropriately and finds that memory does help a person remember words and plays an important role for SLA students. First, it is important to remember that WM is There have been many studies that have been done to examine whether gestures help in remembering a word. First, the Thompson, Woodall & Folger study was designed to investigate whether movement affects speech processing, but was not constructed to investigate the ability of people to process information conveyed independently through movement. In this study, we will analyze whether memory for speech increases because movement provides an overrepresentation (as in movement information matches speech information) or because it enriches representation?

CONCLUSION

In analyzing the data, we first investigated whether gestures, if recalled, influenced participants' interpretation of accompanying verbal information. We focused on some of the movements in remembering words such as touching certain body parts such as the head, hands or moving the eyes to remember words. The function of gestures in communication Researchers have found that when people speak, they often produce gestures. The emergence of such findings has led to debate about whether gestures carry a serious communicative burden (Kendon, 1994). We found several possible functions of why they perform movements in remembering a specific word. One of its functions is to provide additional information when speaking. Previous research has shown that the more inadequate speech is, the greater the role that cues play (Kelly, Barr, Church, & Lynch, 1999; Church, Ayman-Nolley, & Mahootian, 2003). In some cases we also found that doing body movements such as touching the head or moving the eyes can make some people able to buy time so that they can speed up memory along with the movements they make. So if they can't remember a specific word they can explain an overview of the word he is trying to remember

A further function of gestures is to increase the retention of speech events in memory. Our research corroborates the research of others showing that movement aids speech processing (eg, Woodall & Folger, 1985; Thompson & Massaro, 1994). The third function of movement may be to increase access to memory about the concepts or core underlying the topic to be discussed. In particular, we suggest that gestures aid information retrieval using the same process as Krauss (1998; Krauss, Morrel-Samuels, & Colisante, 1991). Krauss would argue that a speaker gestures to aid the speaker's own internal access to a word. Usually these movements are mostly done in speaking because speaking alone requires brain work in finding words and assembling them into sentences, usually some people know the gist of what will be conveyed but forget a few words, therefore these movements are able to make a person find words that are relevant to the core so that they can convey the idea.

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