Original Article

The Relationship between Memory and Language Learning

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A B S T R A C T

The proposed study investigates the relationship between memory and students' language learning through thematic analysis. Library resources and related articles were utilized for this research. The results indicated that language learners with strong short-term visual and written memories have an excellent performance in learning vocabulary with appendices. Learners with strong visual short-term memory but poor verbal short-term memory and learners with poor visual short-term memory and verbal solid short-term memory also perform similarly. However, learners with poor visual and verbal short-term memory learn better without vocabulary. The results also demonstrated that the language texture leads to the impacts of particular encryption and language-related factors at the time of recall affect the accessibility of memory. It is essential to consider this point in the learning and testing of bilingual individuals to facilitate recall. In general, the results showed that strong memory in language learning has a direct relationship.

Introduction

Language is a thought which, in the form of words and structure, i' 's shaped in calligraphy or voice and reveals the thinker's intention in a particular situation. Language is an exudation of thought and a potential mental force that needs a stimulus to begin its growth and development in a proper context [1]. Schleiermacher believes that one should know the human to learn a language or a text. A person who has his own language and lives with others in the world with potential mental powers, including speech, and this world and the phenomena within it play a decisive role in the realization of speech. The role of the environment in cultivating the power of speech is highly significant. It has led some scholars to think that it is a languagethat determines how one thinks and vision and attitude towards the universe.

However, learning a language or the so-called language learning means pursuing the four language skills of listening, reading, speaking, and writing. In this definition, we call anyone

who seeks to learn these skills and has more or less achieved success in this field a language learner, and you define the whole process as language learning. But language learning has conditions and contexts of which memory is mentioned. Memory is the process of storing experiences and information for possible retrieval in the future [2]. This ability to create memory retrieval underlies all facets of cognition, and in a broader dimension, is the specific ability of human beings to live. Almost everything people do (including communication, perception, social interaction, thinking, and problem-solving) depends on their ability to learn from the past [3].

Active memory is a mental system that temporarily stores and processes information to perform complex cognitive tasks, including understanding, thinking, calculating, reasoning, and learning. Active memory capacity is restricted and varies from person to person. Generally speaking, people with higher working memory capacity have more intricate cognitive functions than those with lower working memory capacity [4].

One of the complex cognitive activities in which active memory plays a significant role in language. The link between this type of memory and first language learning has been proven. Many researchers have also examined its capacity in second language learning in second language learning, and research results indicate that inactive memory capacity and learning various parts of language such as vocabulary, grammar, and syntax, language comprehension, language processing, there is a relationship between written and spoken language.

Despite this matter, there is something about the relationship between active capacity and learning second language structures still unknown to second language researchers. In this regard, one of the issues is the role of an educational environment. Another issue is the role of complexity in language structure. As an individual difference in learning, the role of active memory capacity can explain the differences in the final language acquisition. Due to the research gap in this field and memory importance in language learning, the proposed

scrutiny was conducted to investigate the relationship between memory and language learning, particularly the second language.

Theoretical Foundations

Language

The recent century has witnessed the emergence of several modern sciences, the most prominent of which is undoubtedly linguistics. Linguistics in the 20th century brought about the same evolution in human thought as physics in the 17th century, chemistry in the 18th, and biology in the 19th century. A collection of sciences known as the ""humanities"" (*i.e.,* psychology, psychoanalysis, logic, philosophy, anthropology, history, archeology, sociology, literary criticism, art (aesthetics), and even economics, politics, and the judiciary) far and near, directly and indirectly, are impacted by linguistics. Even some of these sciences, including anthropology, have adapted its concepts and methods and applied them in their field of activity since linguistics is the science of language and language as the highest allegorical (symbolic) system of human beings, which is itself the foundation and definer of culture and the distinguishing feature of human beings from other animals.

Thus, familiarity with the terms and concepts of early linguistics, which was once only specific to the expert concept and has become almost universal today, is for all those who deal with culture (in the general or specific sense of the word) in some way, performs the most profound tasks. This work does not intend to enter into specialized linguistic issues. Since linguistics begins with language anyway, here it is attempted to define language in the simplest terms.

Relationship

Man, as Aristotle stated, is a social animal and has always been social. No matter how regressive we go in history, we will never reach a time when we see human beings living in solitude. Mankind has always lived in society and has always had a language. We do not know about the human condition before that. It may

have been a period of human animality. And in any case, in the definition of man, they say that they are entitled to ""social animal"" or ""talking animal"", since if we remove the adjective of society and speech from this definition, only ""animal"" remains.

So, if indeed the man has always lived in the body of society, inevitably the most significant issue of his social life has been establishing relations with his fellow human beings. Because direct communication, that is, direct communication of minds with one another (for instance, through gaze or supposedly ""telepathy"") between human beings, is not possible, there is always a need for means. This device is not mere language (although the language is the most prominent means of human communication. A view of our daily social life indicates what various tools and devices man has created to be able to explain his intentions and meanings to understand others and their intentions and meanings. From the facial language to traffic signs are all means of communication, all human social contracts (which they call ""social institution"", from the rules of greetings and introductions and etiquette to rituals marriage and divorce as one of the branches of social life and to establish relationships with others.

The course of history depicts that human beings have invented and applied newer means of communication as they advanced. In the 20th century, at least three significant means of communication - cinema, the radio, television - were invented and shortened the distances between continents.

Human social life is based on communication as social institutions are the means of communication for the flow of life in society. So if we disregard the gratification of individual human instincts, any other activity which remains can be considered as means of communication: from fine arts to traffic signs, even artistic creation, if as they say, the language of human individuality and loneliness. Once the artist exhibits the product of his work and judges others, he does something in communication.

However, language is the most significant important means of human communication and the foundation of all his social institutions.

Language as a Means of Communication

Primarily we remove the terms "language of music", "language of flowers," and "language of images", since these are nothing more than metaphors: neither music is language, nor painting, nor sculpture, even if these arts have anything to do with language. The word "relationship" should be realized in its exact sense: the concept of relationship implies the concept of difference and distance between components relevant to each other. If we state that painting and music are not languages, it is because the material of their work has nothing in common with language. The purpose of language is the ordinary and literal meaning of the lexicon: the most straightforward means we have in daily life to communicate with our fellow human beings. Its first specification is using sounds that originate from the larynx.

But it cannot be demonstrated indeed that the language is the result of the natural use of specific organs of the body, such as inhaling and walking, which is the cause of existence and minus the existence of the lungs and legs. In the science of phonetics and linguistics, we are, of course, talking about the speech organs. However, it should be noted that the first task of each of these organs is something other than creating sound to express the concepts of the mind. For instance, the mouth is used for chewing and swallowing food, the nasal cavities are used for breathing, and so are other parts of speech.

Even the part of the brain that they want to consider as the center of speech (because the damage done to it confuses) undoubtedly has a relation or use of language. However, it is not certain that this is its primary function.

Therefore, language should be considered as one of the social institutions. This attitude towards language has certain advantages: first, human institutions are the result of social life, and language, as we have illustrated, because it is primarily a means of communication between human beings, then it is one of the social

institutions and even the most prominent one; second, human institutions require the application of various spiritual and physical forces, and the language activity is the same; third, there are social institutions in every community of human beings, but their form and functions do not have to be precisely the same; it is also the language: the tasks it performs are the same everywhere, but the way it operates in each community is clearly different from the other, so that it can only perform its task of realization among a single and specific group of individuals; next, since human institutions are not among the priorities, that is among the matters whose existence precedes human existence, but are the outcome of his social life, they are subject to change and alter due to the various requirement and in dealing with other human societies; It is also the different languages of human societies. However, language should be distinguished from other social institutions, or in other words. It should be defined as both comprehensive and restrictive.

What is Language Learning?

"Language learning means pursuing the four language skills of listening, reading, speaking and writing."

In this definition, one considers anyone as a language learner who seeks to learn these skills and has more or less achieved success in this field and defines the whole process as language learning. Not surprisingly, most language learners present such a definition to respond: "What is language learning?" because language learning looks similar. Is this definition incorrect? This is an operational one of language based on observation. Besides, a more efficient definition of language learning can be provided and the desired answer to "What is language learning?"

Language learning As a Behavior and Behavioral Tendency!

However, it may be interesting and a little strange that successful language learners interpret the language learning process as a character and attitude. And this behavioral tendency is to "have a sense of curiosity about the target language." In their viewpoint, language learning is not just about going through a series of rules, words, and techniques. Language learning is being curious about a language. Different people attend a language course. Some leave the course. Some complete it but do not feel much change themselves. Despite this, others feel that they have been learning for years by completing the course. The main difference between these language learners is their curiosity about the language and the behavior that arises from this curiosity. Curious people do not pass any sentence in the language quickly and indifferently. Each sign, point, word, sentence, and paragraph is an excuse to learn for these learners.

Sometimes these people may spend hours with a short text. And they enjoy learning so much from a short paragraph. A typical learner, on the other hand, if he spends more than 5 min on one paragraph, may feel lagging behind others and should move quickly to the next paragraph. Based on this definition of language learning, one should adjust learning behavior based on curiosity, not on the syllabus volume to be passed, nor on the number of courses others have learned.

Bilingual People

Based on Oxford Dictionary, a bilingual term refers to a person who can speak in two languages or one who knows and uses two languages [5]. The term bilingual generally refers to individuals or groups whose language proficiency in those two languages, especially in the verbal dimension, is limited to the native users of those two languages. However, according to Butler and Hakota, "bilingualism is an intricate psychological, linguistic, and socio-cultural behavior with various dimensions" [6]. There is no perfect consensus among researchers on the definition of bilingualism. According to Bloomfield, a bilingual is a person whose language skills in both languages are equal to those of native speakers of those two languages. Such a view narrows the scope of appointments for bilinguals [7]. Moreover, it seems complicated to implement such a

definition based on fluency as native monolingual users.

Hagen defines bilinguals as people who have the perfect power of expression and express concepts in another language. According to this definition, beginner learners are also considered bilingual [8]. Other researchers have regarded various degrees for assigning different people bilinguals [9-11]. With these descriptions, bilingualism is considered on a spectrum.

Memory

Memory is a capability by which previous experiences are stored, and information is extracted for usage while needed. This ability to represent and retrieve information is fundamental to all cognitive phenomena. For instance, the ability to think and solve a problem is highly dependent on the use of previous experiences. Cognitive psychologists frequently consider the main memory processes to include three kinds of operations, including decoding, storing, and retrieval. Each of these steps represents a part of memory processing. There are several extents accepted classifications of memory. In some sources, memory is classified according to the duration of information retention, in others based on the nature of the memorable material, which is discussed below.

Recall and Forgetfulness

Forgetting means our inability to recall information from long-term memory. Much of the information we think we have forgotten has never been stored in long-term memory. That is, we have not learned it properly. Real learning is then storing information in long-term memory, and actual forgetting is the loss of information from that memory. However, in transferring information from both sensory recordings to short-term memory and from short-term memory to long-term memory, information is deleted, which are mentioned as follows.

The Reason for Removing Information from Sensory Recording

As we have seen in the discussion of sensory recording or sensory repository, a lot of information enters it at any given time, most of which is not used. From a large amount of information that enters the sensory repository at any given time, only the information that is of interest to us is selected and deposited to other parts of the memory for processing. Therefore, inattention is the most important reason for removing information from sensory recording.

The Reason for Forgetting Information from Short-Term Memory

Because short-term memory capacity is restricted, it fills up quickly. Once the short-term memory is complete, the previous information should be removed to enter new information. This phenomenon is called substitution. Therefore, an essential factor in forgetting or deleting information from short-term memory is replacing new content with the old one. Another reason for forgetting information from short-term memory is their spontaneous deletion due to time passage or the effect disappearance. This theory is known as memory rejection theory, according to which information stored in short-term memory can be considered as traces or effects disappearing over time.

Reason for Forgetting Information from Long-Term Memory

Psychologists generally believe that information entered into long-term memory, unlike sensory and short-term memory, is never lost and can always be recovered (recalled) under the right conditions. Nevertheless, experts have mentioned several reasons for not remembering information from long-term memory, which we will explain below.

Repulsion

A group of psychologists who follow Freud's theory of psychodynamics believes that sometimes we deliberately reject certain information or memories that we do not want to recall and therefore forget them. Therefore, one of the theories related to forgetting information from long-term memory is called repulsion or suppression theory.

The concept of memories repression, known in Freud's theory of psychodynamics, refers to man's disability to recall unpleasant events or related matters. This type of forgetfulness is often called emotional forgetfulness. Retrieving information can be considered a recovery problem. According to this viewpoint, for some reason, the vital signs of recovering the recalled memories are not available. Anything that permits a person to access retrieval marks opens the way for recall and removes barriers to recalling memories. Psychoanalysts use the method of free association, that is, saying what comes to mind for this purpose. While associating freely, one may find the necessary signs of recovery, which lead to forgotten memories.

Interference

Psychologists have proposed another theory to justify not remembering information from long-term memory, which is called interference theory. According to this theory, the learned information overlaps and mixes, making them unforgettable. Sometimes information is updated. This type of interference is called posterior inhibition. Sometimes previously ed information causes us to be able to recall newly learned information. This type of interference is called precursor inhibition interference.

Recovery Problems

The third and most significant factor psychologists have mentioned for not remembering information from long-term memory is retrieval problems. If we find the vital signs or clues to recovery, we can remember the forgotten information. This is like a file in the mind archive, but we do not have the number. If we have the file number, we can easily find it in the archive. As another analogy, finding something from long-term memory is like finding a book in an extensive library. If we do not know what code and where the book is placed, we cannot find it, even if our favorite book is available in the library.

Three Main Memories

1. Sensory information storage
2. Short-term memory
3. Long-term memory

A) Sensory memory: It is the first stage of news processing. The general system of receptors is called sensory memory. In sensory memory, an exact copy of sensory information is stored. Sensory memory corresponding to the sense of sight is called the visual reservoir; sensory memory corresponding to the sense of hearing is called the echo reservoir.

B) Short-term memory: The information processed in sensory memory is converted into visual or audio patterns and transmitted to short-term memory.

Unlike sensory memory, where precise information is stored following sensory stimuli, in short-term memory, information is encrypted.

There are three types of data encryption in short-term memory:

1. Audio encoding
2. Visual encoding
3. Semantic encoding

In short-term memory, information is encoded mainly by voice or audio.

Strategies in Short-Term Memory

Memory strategies are practical methods that aim to store information and facilitate the transition from short-term to long-term memory. Strategies change with age. The three types of mental strategies used by adults and their existence in children have been explored:

1. Exercise (mental review)
2. Conceptual organization
3. Expansion (cultivating the subject)

Mental Practice

This strategy is one of the most straightforward strategies applied in recalling. Flowell research indicated that spontaneous use of these

strategies is enhanced by aging. Older children, unlike younger ones who do not want to repeat the topic, repeat it. Flowell demonstrated two reasons for young children who cannot use strategies applied by older children.

One of the causes is the lack of intermediaries, or the other cause is the shortage of production. Lack of mediators means disability to realize the facilitating and mediating role of practice. (The child cannot use a particular strategy, such as repetition and practice, even when it is possible for him to do). Lack of production also means the disability to generate an improvised strategy.

Semantic Expansion

The development of a subject requires the creation of connections or an ordinary meaning between two or more components of information. Through this method, the learner adds or expands things to the content he wants to learn, and his goal is to make the content more learnable and memorable. Cultivating the topic is one of the most decisive information processing methods. When one succeeds in using it, it easily replaces other strategies.

Young children seem to rely on tangible and practical mental images to cultivate information, while adults use verbal cultivation, such as relating two unrelated sentences in one sentence. Findings indicate that the bias in depression is mainly related to the information expansion process.

Organization

Organization is the best way to learn complex and detailed content. Organizing content can be very simple or very complex. However, all of them are that they are based on our knowledge of similarities and differences. In other words, organizing means placing materials conceptually related to each other in a group, which forms a class.

Long-Term Memory

Information reached short-term memory is transferred to long-term memory if repeated, reviewed, and linked to information we have already learned. To transfer information to long-term memory, it should be encrypted. Data processors have studied three types of processes for remembering information from long-term memory:

1. Recognition
2. Recall
3. Reconstruction or reproduction

Recognition

Recognition means receiving the similarity of one stimulus with another one that the individual has already experienced. Recognition is the easiest and simplest form of recalling because the subject is present and self-remembering. The experience of numerous studies depicts that there is recognition from early childhood. Recognition becomes much stronger in the late preschool years, and recognition strategies become more assertive in adulthood.

Recall

It is a kind of production memory because it includes the ability to spontaneously recall a subject that does not currently exist. The onset of recurrence is apparently around one year or a little earlier.

The memory specification of children between the ages of three and four indicates that cognition is stronger than recall. Information processors believe that recognition is feasible for both children and adults. However, there are drawbacks to remembering children compared to adults.

Reconstruction or Reproduction

Reconstruction is the reorganization of information. In Bartlett research shows that when the subject matter given to individuals for preservation and recollection is intricate and meaningful, recollection is not researched as fragmented information. However, individuals are excluded from content and add (incorrect content, because they did not exist in the original information) that provide online content. This

trend makes it better to restructure or reorganize the content.

Types of Long-Term Memory

Event Memory

We mean our memories of our personal experiences. "A kind of mental film of what we have seen and heard." In other words, it includes events that have occurred in our lives and are related to a particular time and place.

Semantic Memory

Meaning is stored in this memory. The information in semantic memory is stored as a proposition or schema.

Process or Method memory

Memory is about how activities, particularly physical activities, are performed. Process memory is the process of informing how to do an action.

Active Memory

The term "short-term memory" was initially used to refer to the ability to access information in mind in a short time. After learning more about this memory and discovering its applications, the term active memory was used for this, which refers to the ability to sort information and record it in long-term memory.

Information can remain inactive memory as long as it is repeated. Telling a phone number repeatedly will remain in your active memory as long as you repeat that one. You have to stop the repetition to forget that number (you may not forget it! We will talk about moving things from active memory to long-term one).

Active memory has its limitations. Although it can hold a lot of information, it does not seem too much compared to what we as human beings tend to learn. The accepted research in this area depicts keeping about seven items inactive memory. It plays a prominent role in mental activities such as solving a problem in our mind. It seems that the strength of this memory depends on human age and can also be impacted by other factors. The easiest way to think of active memory is to say that it enters the scene when something is accomplished. Activated memory is a cognitive function responsible for preserving instantaneous information and manipulating and using it in thinking. It is the way you delegate the things you encounter to the parts of your brain which can act. Thus, this type of memory is essential for focusing on a task, avoiding distractions, keeping you up to date, and being aware of what is going on around you.

Memory impairment occurs differently in each person. However, in children with learning disabilities, functional memory impairment severely exacerbates learning difficulties. Besides, to assist children with poor memory function, regardless of the presence or absence of other learning disabilities, a step-by-step teaching method can be utilized. But initially, we need to know exactly what active memory is and what it matters.

Dr. Tracy, a researcher at Psychology School in Florida University, believes that active memory reminds information recorded in the past and used recently. Based on his viewpoint, it is exactly what determines the significant differences in learning success [12].

Active memory is part of the total memory system. It helps us to store and record significant parts of information as it enters new information while processing it in mind. Children often use this ability while doing math or listening to a story. Active memory is a short-term use of memory functions. It is a set of skills that helps us remember the information we need to solve a problem or complete a task and be able to recall it on time. It is an essential part of all executive functions of the brain. A set of great mental skills which permits us to plan, solve problems and organize problems. Active memory helps us have a lot of information in mind simultaneously while performing specific mental tasks. In doing tasks, it helps us always have our ultimate goal in mind and be able to accomplish the task while processing other information.

Children and adults generally utilize two general types of active memory per day. These memory skills begin to develop in early childhood and become more stable in early adolescence and adulthood.

Verbal-Auditory Active Memory

When children do their homework based on step-by-step verbal instructions, they are using their verbal-auditory active memory skills. If this ability is weak for someone, he will probably have trouble following oral instructions.

Spatial-Visual Active Memory

This memory capability permits an individual to solve a problem or accomplish the tasks by memorizing and remembering the shape, image, and pattern of a subject. Learning is done based on images, shapes, and visual patterns using spatial-visual working memory skills.

Memory and Time

Most people who have researched memory have divided it into at least two terms: short-term and long-term memories. Initially, the mind temporarily stores information in the sensory system, also called sensory memory, which refers to the part which holds something prior it enters the short-term or long-term memory. Each of our senses has a particular way of holding something in this sensory system. While something is seen through the eye, it first and temporarily enters the visual sensory system, and even if you close your eyes, you can still observe it. When you hear a sound, you can hear it even after hearing it. Each sense has a diverse method for this immediate and short-term persistence with a different temporal persistence in the sensory system. If we observe this information, then it enters the active memory.

Long-Term Memory

What remains in connection with memory and learning goes back to long-term memory, from what the learner has learned a few moments before to what he has learned since childhood. Long-term memory generally refers to the system of the brain having the capability to store and retrieve information almost permanently.

There are various theories about how to store information in this memory. One theory is that information primarily enters the active memory and then to the long-term memory over some time. Theories are indicate these two memories work in parallel and together. This does not, however, affect how Leitner software works.

What is certain so far is that there is no limit to long-term memory capacity. Individuals are constantly learning new information and skills throughout their lives.

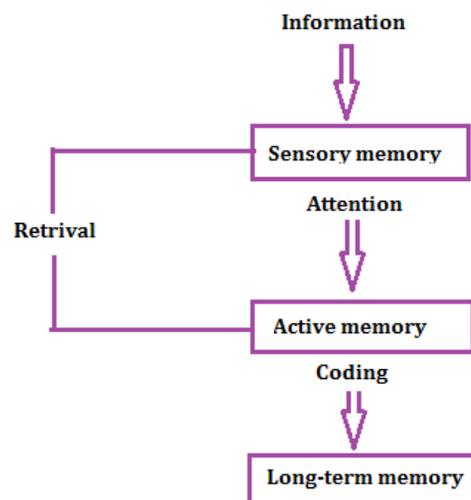A simple model of memory makes it more evident to percept its function:

Figure 1. A simple model of memory

Information Retrieval

Hermann Ebbinghaus was a leading scientist who first attempted to realize how the human brain recalls past learning and experiences. Since 1890 to 1909, he carefully conducted numerous experiments to determine how we remember and do not. These experiments developed to the point where he discovered a specific formula that expressed the extent to which the brain stored information.

The simple expression of this scientist's discovery is that without repetition and other information coding techniques, the brain forgets the received information, not at a constant and linear speed but incrementally and exponentially (in the exponent of 2). Our brain forgets about 75 percent of the information it receives after 48 hours if it does not use data encryption methods.

Research Background

In a study conducted by Jahangiri etal., entitled [13]: "Active Memory Capacity and Learning Second Language Structures in an Implicit and Explicit Environment: The Impact of Language Structure Type", which was conducted to determine the relationship between functional memory capacity and the ability to learn simple and intricate structures. The second language was conducted in an implicit and explicit space. This study aimed to determine the relationship between functional memory capacity and learning second language structures in an implicit and explicit learning environment, as well as the role of simple or complex language structure. For this, two English language structures with varying degrees of complexity were selected. 59 Persian- English trainees were selected through a test and randomly assigned to one of two explicit or implicit groups and received the essential training. Their level of knowledge of these two language features was assessed once prior training and twice after training with the test of "timed grammatical judgment" and the test of "summoned oral imitation". Composite memory capacity test was applied to measure functional memory capacity. The results indicated that training on learning the desired structures was significant in both groups. The correlation results demonstrated no significant relationship between functional memory capacity and learning in the tacit environment. However, the relationship between functional memory capacity and the ability to learn in an explicit environment varies depending on the type of language structure.

In a study conducted by Roshan et al., entitled [14]: "The Relationship between Memory and Language: The Effect of Language Skills and Language Experience on Free Remembrance of Bilinguals", the purpose was to influence thinking according to Warfian's linguistic relativity hypothesis in 1956. This study aimed to determine the relationship between memory and language. This research was a quasi-experimental study, and its statistical population included 1500 female undergraduate students of Payam-e-Noor Shahindej University and the original language of the Azeri subjects. Among them, 100 Persian and Azeri bilinguals were selected and answered the questionnaire of language skills and experience level of Marian, then highly. Equivalently skilled individuals in both languages as balanced bilinguals and skilled people differently, the two languages were selected as unbalanced bilingual individuals and a free recall test was conducted. The results showed a significant interaction between encryption language and retrieval language in balanced bilingual subjects; however, this difference was not significant in the group of unbalanced subjects.

As a consequence, when the language of encryption and retrieval is the same, the amount of recall in the balanced group of subjects will be higher than when both languages are not the same, i.e. when the language of encryption and retrieval is the same in bilinguals, memory performance is better than while both languages are not similar. This illustrated the impact of adjusting the level of skills and experience of the subjects in both languages on the results of the recalling test. In other words, the language texture leads to the particular encryption effects and language-related factors' impacts on memory accessibility when recalled. This is highly noted in bilinguals' learning and testing for facilitating recall.

In a study [15] "The effect of short-term memory on language learning of mentally retarded children based on active memory training software,"; the primary purpose of this study was to determine the effect of short-term memory of mentally disabled children on their language learning based on active memory training software. In this quasi-experimental study, 32 mentally disabled students were randomly selected from among the mentally disabled students of School of Exceptional Children of Religion and Knowledge in Amol city in the academic year 2013-2014 in the first, second and third standards were divided into two experimental and control groups, the active memory training software and TOLD language growth test were then performed on the statistical sample. Data were analyzed by analysis of variance. Findings indicated that short-term memory impacts language learning of mentally disabled children; the age variable also affects short-term memory and language learning of these children. The effect of educational level on language learning of mentally disabled children was also confirmed; however, the effect of the educational variable on the short-term memory of these children was not approved.

In a study "The Effect of Short-Term Memory on the Ability to Learn English Words of Persian-language Learners through Mobile and Multimedia Representation", by combining cognitive theories and learning with the help of quality computers, learning process English vocabulary was studied for Iranian learners. For this, 161 language learners between the age ranges of 16-19 years old were selected [16]. To ensure that their language skills were level, a skill level test was conducted, and they were divided into 4 groups using short-term visual and verbal memory tests. Moreover, new vocabulary with visual and textual appendices was provided via bulk Bluetooth transmission. Finally, they took cognitive and memory tests. Based on the results, it was found that learners with strong short-term visual and written memories have an excellent performance in learning vocabulary with appendices. Learners with visual solid short-term memory, but poor verbal short-term memory, and learners with

poor visual short-term memory and verbal solid short-term memory also perform similarly. Besides, learners with poor visual and verbal short-term memory learn better without vocabulary. The results of this study indicate a close relationship between the type of educational content presentation and the cognitive level of learners [17-19].

Roshan (2011), in a study entitled: "The Effect of Language Experience Skill Level on Bilinguals' Free Recall" concluded that there is a significant interaction between encryption language and retrieval language in balanced bilingual subjects. However, this difference was not significant in the group of unbalanced subjects. When the language of encryption and retrieval is the same, the amount of memory in a balanced group of subjects will be more significant than while both languages are not the same, that is when the language of decryption and retrieval is the same in bilinguals, memory performance is better than when the two languages are not similar. This indicates the effect of adjusting the level of skills and experience of the subjects in both languages on the results of the reminder test. In other words, the texture of the language leads to the effects of proprietary encryption, and language-related factors affect the accessibility of the speaker at the time of recall which is of high significance in both learning and testing of bilinguals for maintaining the recall [14].

Conclusion

Successful language learners interpret the language learning process as a character, and behavioral tendencies. And this behavioral tendency is to "have a sense of curiosity about the target language." Language learning is being curious about a language. Different people attend a language course. A spirit of curiosity and attention to learning opportunities ensures that individuals are always learning new things, and therefore the volume of language knowledge will not make them.

On the other hand, by observing opportunities for review, they quickly recover what they have learned and thus increase their growth every day. However, all this requires a strong memory to not forget what is learned. The results of

reviewing the research background and reviewing the theoretical foundations of the research indicated that language learners with strong short-term visual and written memories have an excellent performance in learning vocabulary with appendices. Learners with strong visual short-term memory but poor verbal short-term memory and learners with poor visual short-term memory and strong verbal short-term memory also perform similarly. Besides, learners with poor visual and verbal short-term memory learn better without vocabulary. The results also indicated that the texture of the language leads to the effects of particular encryption and language-related factors at the time of recall impact on memory accessibility. It is highly noted in the learning and testing of bilingual people to facilitate recall. Generally, the results depicted that strong memory in language learning directly relates.

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