



## LEARNING ENGLISH IN THE UNIVERSITY CONTEXT: MOTIVATION, CREATIVITY AND RETENTION

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### ABSTRACT

This paper deals with the teaching of languages, seen through the prism of the theory of multiple intelligences (MI) proposed by Gardner. I take the position that a student's level of achievement is influenced not only by the way teaching is delivered, but also by a set of correlations that make each individual influenced by an immediate environment and a non-immediate environment. The human ability to respond appropriately to a set of correlations is what constitutes the modern definition of intelligence<sup>1</sup> and more specifically the theory of multiple intelligences. I hypothesize that a multiple intelligences approach has a positive effect on language learning. In order to confirm or not this hypothesis, I evaluated the feedback of various actors following activities based on multiple intelligences. It deals with the correlation between the theory of multiple intelligences and success in the specialty English course, the correlation between the theory of multiple intelligences and creativity and an analysis of the relationship between the theory of multiple intelligences and student motivation. The conclusion offers some suggestions for teaching specialty languages.

**Keywords:** Student learning, multiple intelligences, Gardner, correlation, student motivation

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### Introduction

#### *Towards a definition of intelligence*

Various definitions of intelligence have been proposed throughout the history of intelligence studies. According to Sternberg<sup>2</sup>, "looking closely, it seems as if there are as many definitions of intelligence as there are experts to define them." Scientists and psychologists have often defined intelligence in a similar way, but using different terms. However, the most general definition is the ability to perceive information, retain it in the form of knowledge, and apply that knowledge appropriately within a contextual environment. According to Gottfredson (1997)<sup>3</sup>, psychometric intelligence is manifested in generic thinking abilities such as effective learning,

reasoning, problem solving, and abstract thinking. Intelligence is a useful tool in all areas of life, but especially when tasks are new, without instructions or complex, or when situations are ambiguous, changing or unpredictable. Other definitions refer to intelligence as an individual ability combining logic, comprehension, self-awareness, learning, emotional knowledge, planning ability, creativity, and problem solving.

#### *Problem solving and decision-making*

Solving everyday problems involves examining the solutions or attempts at resolution that individuals generate when they face a problem that affects them regularly. These problems can be of different orders. For example, disagreement about when to meet friends, seeking direction from

a tourist in a new city, or the ability to answer questions about a proficiency test in English. According to a German study, intelligence and the ability to solve problems are very strongly correlated. Strategies for problem solving involve using knowledge to pursue goals and find solutions.

#### H. Gardner's theory of multiple intelligences

It is of great importance for every human being to identify his innate abilities<sup>1</sup>, to create new ones and to use these abilities to learn, unlearn<sup>2</sup> and relearn in a rapidly changing world<sup>4</sup>. Among these innate abilities, there is a mental capacity called intelligence. In the previous chapter, intelligence has been described as a biopsychological potential for processing information that can be used in a given context to solve problems or create products or objects that are valuable in a given culture. The concept of intelligence has been the cornerstone of many educational theories and practices; in some of these theories intelligence is considered changeable at different ages and skill levels (Feuerstein, Ran, Hoffman & Miller, 1980). Among theories recognizing the changeability of intelligence, there is the theory of multiple intelligences (TMI), proposed by Howard Gardner. From 1983, Gardner argued that in order to appropriately deal with the many problems we face in the world, it is important to recognize and nurture the different (and many) human intelligences and combinations of intelligence. According to Gardner, human beings are different, mainly because they have different combinations of intelligences<sup>5</sup>. There are two major differences between the traditional view of intelligence and that of Gardner. Traditionally, it was believed that individuals were born with a fixed level of intelligence, which did not change over time. Gardner, on the other hand, believes that learners should not be judged by what they cannot do, but what they can do, and that education should focus on developing the potential of learning. When the theory of multiple intelligences was proposed in the 1980s, not only did it attract the attention of many psychologists, but it also attracted the attention of many teachers. Since then, the theory has been

explored by teachers and policy makers. The theory of multiple intelligences can be a useful tool for teachers to design activities. According to this theory, more than one type of intelligence is often found in a learner; educators can therefore take into account the individual differences of students. Gardner (1999)<sup>6</sup> states that "the theory of multiple intelligences has helped break the age-old grip of psychometricians on the subject of intelligence" (178). He first decided to investigate multiple intelligences when he was a teacher. He realized that even if a person is highly skilled in one skill, a similar ability in another intelligence may be lacking. For example, although it has been thought that the ability to write and make music emerges from the same brain hemisphere, a talented musician may encounter difficulties in lexical learning or mastery of the basics syntax in a second language.

Gardner's theory attempts to characterize the system of structures and mechanisms of the mind and to prove their existence. Evidence is usually neuropsychological and psychometric. Gardner has identified eight different regions in the brain, and as a result, his theory establishes eight types of intelligence. These will be discussed in detail later in this section. The other main theory of intelligence having a biological foundation is Spearman's so-called factor 'g'. In summary, the main difference between the theory of multiple intelligences and Spearman's "g" factor is that, according to Spearman, intelligence is a singular general trait, whereas for Gardner, intelligence is a plural feature composed of several types of independent intelligence.

#### *Criticism of the theory of multiple intelligences*

According to the multiple intelligences theory, the student's performance on tasks and activities based on the same type of intelligence must show a strong correlation, and the performance on tasks and activities based on different types of intelligence must show a low correlation or no correlation at all. However, in a study by Gardner and Hatch in 1989, and the review of the same study by Krechevsky and Seidel (2001)<sup>7</sup>, task scores based on the same type of intelligence were weakly correlated and task results based on different types of highly correlated intelligence, with a few exceptions. It is of paramount importance to mention that this finding, that the performance results of a person in two different tasks but targeting only one intelligence may not be correlated, may be evoked both to refute the notion of general intelligence and also that of multiple intelligences. In other words, we still do not know

<sup>1</sup> An innate ability refers to the genetically preprogrammed abilities of human beings to learn something. For example, the theory that humans are genetically preprogrammed to learn languages has been proposed by the American linguist Noam Chomsky

<sup>2</sup> To unlearn: to make an effort to disregard one's usual way of doing something in order to learn a new or a better one.

whether there is a single general intelligence or different intelligences that function independently of each other. Research has shown conflicting results in this regard. According to the theory of multiple intelligences, the intellect is made up of independent components. Thus, an individual must be able to perform two activities that involve two different types of intelligence at the same time. In addition, a person who undertakes two activities that involve the same type of intelligence simultaneously will face some difficulty, and the success of at least one of these activities will deteriorate. Many studies claim this<sup>8</sup>. However, according to Klein (1997)<sup>9</sup>, this cannot explain how individuals translate information from one type of intelligence to another or how individuals perform multiple tasks, such as translating information from a verbal form to a visual form and vice versa. Even the simplest or most complex cognitive operations are subject to considerable treatment limitations when combined with another task.

#### *Educational criticism*

Proponents of the theory of multiple intelligences, including teachers and researchers<sup>10</sup>, argue that one of the main advantages of using the theory of multiple intelligences in an educational context is that learners become aware of their own weaknesses and strengths.

#### *Response to the critique of Gardner's theory*

Chen (2004)<sup>11</sup> also argued that since "the absolute objectivity of any methodology is illusory" (p.17), the question of the lack of empirical evidence of the theory of multiple intelligences is futile. Without defined components, the validity of intelligences cannot be verified. Chen (2004) argues that since multiple intelligences are not a capacity, but rather a "biological potential of an emergent, reactive and pluralistic nature", they can only be validated with new measures that identify the "different facets" of each intelligence in its operation over time (pp. 19-20).

## **DISCUSSION**

### **Creativity: the heart of learning**

There are many scientific definitions of creativity. Some definitions are formulated in terms of production, that is, when the result is an invention or a discovery. Other definitions are expressed in terms of a process, a type of person, or a set of conditions. Creativity is a natural process that occurs when an individual needs to solve a problem, when existing conditions and solutions are not sufficient, or when proven and genuine methods no longer work<sup>12</sup>. However, the production of

something new by a person or a society is included in almost all definitions of creativity. Other traits are also present in all definitions of creativity, including the fact that creative contributions must be authentic, transferable, and surprising in terms of what existed at the time of discovery. It is interesting that all of these features cannot guarantee that anyone who displays these characteristics will creatively at any time, but if we lack these characteristics, chances to act creatively decrease so significant.

If we agree on the above three traits of creativity, that is to say, being authentic, generalizable and surprising, we can conclude that the formulation of a question or a problem is the starting point and the birth of creativity. This means being sensitive to problems and gaps and finding a different way to approach and solve a potential problem. That said, creativity is a trait that is considered an individual difference; this is why some people have a greater potential for problem solving.

#### *The relationship between intelligence and creativity*

The relationship between intelligence and creativity has been the subject of empirical research for decades. Nevertheless, there is still no consensus on how these constructs are related. One of the most important notions about the interaction between intelligence and creativity is the threshold hypothesis, which assumes that above-average intelligence is a necessary condition for high-level creativity. While previous research supported the threshold hypothesis, it has been questioned in recent surveys. The threshold hypothesis is commonly studied by dividing a sample at a given threshold (for example, at 120 IQ points) and estimating distinct correlations for the lower and higher IQ ranges. However, there is no empirical reason to set the threshold at an IQ of 120 and, to date, no attempt has been made to empirically detect the threshold.

#### *The theory of multiple intelligences and creativity*

Does creativity lead to intelligence, or does intelligence lead to creativity? This is a common question for researchers in intelligence and creativity. The answer seems to be that creativity is an aspect of intelligence. As Russo (2004)<sup>13</sup> puts it:

Extensive studies of the relationship between IQ (intelligence) and creativity have shown that there are weak correlations between IQ and creativity. Studies show that creative thinking is stronger in children with high intelligence, but many children with high intelligence

also have very low creativity scores. Students can be very creative if their personalities allow it, regardless of their intelligence. Howard Gardner found that, "the most finely refined set of intelligences is unlikely to produce creative products unless the individual also has certain personality traits. (p. 179)<sup>3</sup>

According to Hor, Baki and Tajularipin (2011)<sup>14</sup>, cognitive abilities are supposed to adopt two types of approach. They are concerned about either the "rightness" or "relevance" of an answer. The correctness of an answer shows how logical reasoning or intelligence is present, whereas the "relevancy" of an answer relates to the extent to which an answer or solution to a problem is appropriate or appropriate to the cause of the problem or context, which is the central factor of creativity, with originality and novelty. You might think that creativity is like intelligence, that it's something that everyone has to some extent and it's not a fixed attribute, but a person's level of creativity could be developed to varying degrees.

#### *Creativity and language learning*

Many teachers are increasingly feeling the need for creativity in teaching and learning. It is often implied that exposing learners to literary texts will develop their ability to use language more creatively and stimulate their motivation for language learning. This hypothesis may seem intuitive and plausible at first glance, but there is in fact little empirical evidence of the superiority of the use of literary texts rather than more factual texts with adolescent learners, because research has now given little or no attention to this issue.

#### *Factors that affect creativity*

Creative processes can be encouraged in all educational activities. One could say that creative teaching is about creating a learning environment that encourages learners to see the essence and

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details of the subject matter, to formulate and solve problems, to weave the links and interrelationships between the various domains, to accept and react to new ideas and to include elements of surprise in their work (Reid & Petocz, 2004). Creativity experts repeatedly stress the importance of discovering both problems and solutions. Axelrod (1997)<sup>15</sup> states on this subject:

Original ideas should be actively sought. For example, a learner who has been assigned a presentation could be encouraged to add a personal assessment and use any unique techniques he or she wishes. Too often, the emphasis has been placed on "correct" thinking that requires a solution and a method. Alternatives to a problem do not need to have been suggested before by others to be viable. Alternative solutions that are not found in textbooks should be sought from learners. Students should be forced to move beyond a solution and computer technology can help. (p. 8)<sup>4</sup>

#### *Basic attributes of creative students*

For teachers to be able to increase the level of creativity of learners, it is helpful to know the basic characteristics of creative learners. In this way, when learners show these attributes, teachers can encourage them. In addition, teachers can try to emphasize these qualities and inspire other learners to work and develop the same qualities. Below, we present a brief list of some of these qualities and a short definition of each of them that has been adopted and modified by Gomez (2007)<sup>16</sup>:

- **Originality:** the ability to produce unusual ideas, solve problems in new ways, to have unusual and different ways in different situations, the ability to ask substantive or indirect questions;
- **Cultural presence:** to be involved in the cultural aspects of an environment. For

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<sup>4</sup> Original ideas should be actively sought. For example, a learner who has been assigned a presentation may be encouraged to add a personal assessment and use any of the unique techniques that he or she wishes. Too often, there has been a focus on "right" thinking that requires a solution and a method. Alternative solutions to a problem do not need to have been suggested before by others to be viable. Alternative solutions not found in textbooks should be solicited from learners. Students should be forced to move forward more than one solution and computer technology can help. (p.8)

example, countries may have different types of presence on the world stage, based on culture, sport, innovation, etc. Becoming involved in these areas can create a cultural presence among students;

- **Involvement of rational thinking:** creative students remain rational and logical and can establish logical links between concepts and perceived data,
- **Acquisition:** acquisition of certain professional skills such as writing, engineering, architecture, painting or music.
- **curiosity:** curiosity about emotional experiences and phenomenological marvels,
- **Persistence:** perseverance is a quality of creative students. When faced with a problem, creative learners come up with innovative ideas rather than give up;
- **Independence:** creative students are independent in the sense that they are looking for the unknown, the unusual and the unexplained (Gomez, 2007).

#### *Strategies that can stimulate creativity*

Just as recognizing the attributes of creative learners can help, it is very important to become familiar with the strategies to be used in the classroom to stimulate creativity. Teachers can recommend to their learners at any time the following three strategies, adopted and modified by Gomez (2007):

**Make a good start:** many people wait until they have no choice but to start a job and many expect to be in a good mood. These habits are not beneficial to be creative, because they can forget the ideas that crossed their minds, and procrastination can cause them to forget their original ideas. Therefore, in a language learning device, it is good to ask learners to always have a pen and paper handy, so that they can write their ideas and also their questions; they can also take notes on what the teacher or other learners say is interesting or important to use later.

**Set deadlines:** Setting deadlines can serve as a kind of self-discipline. Deadlines can help learners better organize their time and use their time for effective creative thinking. Since learners are often afraid of not achieving their goals, setting deadlines can be a reminder of what needs to be done and when to do it.

**Know what works for you:** Since creativity and new ideas can happen at any time, it's important for

people to know their own ways of operating in order to incubate ideas. Different people may find different activities useful in this regard, such as going for a walk, listening to soft music, napping or having a picnic in nature. The process, of course, can be helped by computers or PDAs. A practical application of technology integration in the classroom is the use of digital technology, such as tablets, smartphones, interactive sites and video games.

#### *Challenges and difficulties of creative teaching and learning*

According to Sternberg (1988)<sup>17</sup> the school teaches students a low tolerance for failure: learners are therefore afraid of taking risks. Failure can cause the learner to make repairs or feel embarrassed because he is perceived as an idiot. This encourages them to always take the safest path and avoid the challenges. For example, when they succeed in entering higher education, they will tend to choose easy subjects rather than non-challenging subjects. This fact is likely to paralyze the individual's creativity and prevent him from becoming a truly creative individual who takes risks commensurate with his real abilities (Sternberg & Lubart, 1996).

Mary (2000)<sup>18</sup>, in her study of secondary school teachers in Sandakan District, Sabah, Malaysia, used a survey that questioned the teacher's knowledge and mastery in determining the types of thinking skills. The results showed a low to moderate level of mastery in the area of creative thinking and the lack of application of creative thinking in teaching and learning.

#### **Evaluation of creative achievements**

We have integrated creative approaches to teaching in parallel with those of the theory of multiple intelligences. It was therefore necessary to establish common criteria for the evaluation of creativity. Therefore, we study the criteria in eight areas (literature, music, arts and crafts, cooking, sports, visual arts, performing arts, science and engineering) of creative achievement. Moore (1966)<sup>19</sup>, quoting Getzels and Jackson (1962)<sup>20</sup> states:

IQ tests have been used in the past to determine the talent of individuals. In these tests, a person who did not have a high IQ, no matter their abilities in other respects, was not considered gifted. However, we increasingly recognize that there are limitations to the selection of exceptional people through standard testing procedures. Getzels and Jackson propose

three disadvantages to the practice of relying solely on intelligence tests: a. the determination of *giftedness* by IQ tests suggests that the intelligence test samples all known cognitive abilities; b. IQ rarely represents more than a quarter of the variance in critical factors such as academic production ; c. the measurement of IQ has not benefited from progress around our understanding of thought and behaviour. (p. 243)

In addition, as mentioned earlier, IQ tests put too much emphasis on convergent, conforming thinking that includes the ability to memorize and replicate the "unique" answer to a question. This approach does not have much to do with real life. These tests made it possible to avoid divergent, innovative and constructive ways of thinking and arguments. These processes are more often related to creative thinking, music and other related arts.

### **Motivation: the engine of learning**

#### *Towards a definition of motivation*

Motivation is one of the most discussed topics in the modern world of teaching and learning. To be motivated is to be driven to do something. A person who feels no impulse or inspiration to act is thus characterized as unmotivated, whereas an energized or energized person is considered motivated. Motivation is not difficult to describe because it has many strong behavioral indicators, but it is very difficult to account for, for example why people are unmotivated. Lack of motivation results from not valuing an activity, from not feeling competent to achieve it or from believing that it will produce a desired result. . Motivation plays a key role in educational contexts and in any learning process as a learning process. The teaching would be meaningless and ineffective without the motivation to learn. Motivation is a dynamic force that encourages someone to continue working and learning.

According to Pakdel (2013)<sup>21</sup>, the four main factors influencing motivation are explained below.

- the situation: the environment and any external stimulus;
- temperament: the internal state;
- purpose: the attitude and purpose of each behavior; and
- the tool: the means to reach the target or the goal.

In the field of education, these factors can create the motivation and desire to complete a task, to participate in activities, to follow a course and to attain an educational goal, to obtain a certain diploma and to have sufficient success in learning and academic success. In education, motivation is multidimensional. These dimensions include a person's beliefs about their ability to perform a desired task or activity, the reasons for and purpose of that activity, and the emotions that are associated with or resulting from the activity. These concepts go back to Plato and Aristotle. Plato believed in the motivational hierarchy of diet, emotion, and ration. Aristotle, however, believed that this hierarchy is influenced by motivation as much as it is influenced by the human body, since it is affected by body sensors that are relevant to growth and comfort (food), and experience pain and pleasure (emotion). Lack of fulfillment in these areas can lead to an irrational motivational force. According to Aristotle, the logical section, including reason, included the intellect and certain voluntary characteristics. After the Renaissance, Descartes differentiates the active and inactive aspects of motivation, in which the body is the inactive aspect and the will the active aspect of motivation. In this respect, Descartes was the first to attribute motivation to the human will.

In the classification of motivation based on factors of different origin, motivation can be classified into three groups.

- motivation that is based on physical factors, such as the need for food, water, rest, etc;
- motivation that is based on factors of social origin, such as the need for an individual to be accepted by a group of people;
- Motivation based on mental factors, which is strongly influenced by the notion of success or failure in an activity.

#### *Motivation and language learning*

Many teachers share the experience of dealing with students who have lost interest in studies or subject matter. Some of the underlying reasons for this lack of interest and motivation have been explored: the pressure of time and schedule, tests and stress tests, and high demands from administrators and parents alike are some examples. The state of not having motivation, neither intrinsically nor extrinsically, is called amotivation. Lack of motivation affects learners of different language levels, preventing them from reaching their full potential.

*Motivation is a theoretical concept:* This construct is used to explain the behavior or direction of the behavior. Motivation gives reasons for the actions, desires and needs of individuals. It is also what drives a person to want to repeat a certain behavior. In other words, a motive is what drives a person to act in a certain way, or at least to develop an inclination for a specific behavior. As a result, practitioners of all types face the perennial task of promoting greater motivation rather than motivation among those around them. Although some theories argue that motivation is a unitary phenomenon, which varies very little, the position presented here is that motivation has many facets. Learners have not only different levels, but also different types of motivation. In other words, they vary not only in intensity, that is to say, the degree of motivation, but also in the orientation of this motivation, that is to say the type of motivation.

#### *Hybrid forms of motivation*

After childhood, the activities that individuals undertake become less relevant to their intrinsic behavior as the rules and demands of society become more and more important. In-class observations have shown that intrinsic motivation weakens each year of study. According to Barnes (2008)<sup>22</sup>, from early childhood, the same pattern of discovery is repeated, but in more complex situations. Young adults must adapt to new demands and new situations in the learning environment. Thus, the gap between intrinsic and extrinsic motivation becomes so vague that one type of motivation can not exist without the other. This is called internalisation and the integration of values and behavioral rules.

The two key components of Higgin's (1987)<sup>23</sup> "Theory of Self" are the "ideal self" and the "should". The ideal self refers to the presentation of the traits that one would ideally want to hold. These are usually the manifestations of his wishes, hopes and aspirations. On the other hand, the ego should refer to the representation of the attributes that one must possess. This is usually the representation of the meaning of the duties, responsibilities and obligations of someone else. As a result, they may have little or nothing to do with their own wishes and desires. Higgin defined these two concepts in his theory of motivation and self-regulation.

#### *A behavioral approach to motivation*

Behavioral theories of motivation focus on the manifestation of motivation in the behavior, actions and level of participation of the individual. Although many motivational theories are based on a

mentalistic perspective, behaviorists focus on observable behavior and experimental evidence, and therefore the focus is on what creates impulses, values and factors that cause, prevent or retain different behaviors. Behaviorists who have worked on motivation, such as Pavlov (1849-1936), Watson (1878-1958), and Skinner (1904-1990), are interested in observable variables that influence type, intensity, duration, and the frequency of observable behaviors.

#### *Motivation and theory of multiple intelligences*

Motivation can be linked to a number of academic factors. These factors are the important skills identified and involved in the process of preparing individuals for university, workplace, or lifelong learning and critical thinking. According to Lai (2011)<sup>24</sup>, problem solving, collaborative and cooperative learning methods are some of the main motivators. Bossert (1988)<sup>25</sup> argues that motivation is one of the potential mediating processes by which cooperative learning affects success.

#### **Factors that influence motivation**

**Factor 1: value:** According to Gardner (1983), intelligences are developed during culturally significant activities. One might wish to evaluate intelligence in a culturally independent way, but this goal has proven elusive and perhaps unattainable. Cross-cultural research and cognition studies in ordinary activities have shown that performance inevitably depends on a person's familiarity and experience with the materials and requirements of assessments. Hatch and Gardner's research (1989) has shown that the development of an intelligence is impossible if an individual had little or no experience with a particular subject, or if the subject was not culturally valued. Gardner argues that the environment and what is valuable in this environment play an important role in the development of intelligences. The cultural value given to the ability to perform certain tasks motivates the acquisition of skills in these areas. Thus, although particular intelligences can be highly evolved in many people in the same environment, these same intelligences may not be so developed in individuals from another environment.

#### **Factor 2: clear rules and inclusion**

One of the many factors that influence motivation in an educational context is the existence of clear rules. According to Hamada (2011)<sup>26</sup>, one of the main demotivators is confusion. Learners are not willing to actively participate in classroom tasks and activities, in part because they do not understand the modalities, process and

requirements of the learning context. As a result, they may feel excluded, which can lead to a lack of motivation. In a classroom, students should find the rules logical and understandable; moreover, they should feel that the rules are geared towards the goal they have chosen. According to Gardner (2006a)<sup>27</sup>, having a clear set of rules and informing students of exactly what is expected of them helps the learning process. In other words, having a set of clear rules can be a motivating factor.

#### **Factor 3: feeling of ability**

The sense of capacity or self-efficacy is a belief that is modulated according to the abilities that the individual uses. For example, a person may feel able to write articles in English without necessarily having a high level of English as a foreign language. If not, he might feel that he can at least write about his basic ideas and then get help to improve the article. Thanks to his experience, this person has developed a feeling of efficiency that is more generalizable than the ability to write in English.

#### **Factor 4: feedback**

Another factor influencing motivation in an educational context is the role of feedback. According to Ryan (2000), providing optimal challenges and relevant thinking feedback facilitates internalization. Several preliminary studies have shown that positive feedback on academic work increases intrinsic motivation, while negative feedback decreases it. Other studies such as Pickens (2005)<sup>28</sup> has shown that negative and positive feedback, if provided correctly and continuously, could influence motivation in a positive way. . Therefore, in a language course, students' awareness of their own progress can affect their level of motivation.

#### **Factor 5: balance between choice and control**

Finally, the balance between control and choice is also a central factor. The role of "control" has been strongly emphasized in the concept of motivation. It has been demonstrated by Hidi and Harackiewicz (2000)<sup>29</sup>, that giving choice to learners in certain decision-making processes leads to autonomy and that the more the learners are autonomous, the more motivated they become.

#### **Factor 6: The role of the teacher**

Without sufficient motivation, even people with the most outstanding skills cannot achieve their long-term goals. Therefore, it is essential to identify the activators of motivation and the ways to nurture it in their students and in their classrooms.

According to Akinboye (1996)<sup>30</sup>, to motivate is to incite. Motivational attitudinal behaviors explain the student's desire to acquire knowledge, his need for success, his egocentricity, his interest in a particular subject. Since teachers interact with students and guide them through their learning encounter, their role in motivating student interest is important, and even more demanding when such an interest needs to be maintained.

#### **Implementation of the theory of multiple intelligences for stress management**

According to Gottfried (1990), students with high IQ and strong motivation are more likely to cope with anxiety. These students have a more positive perception of their academic skills and a lower level of academic stress. The concept of adaptation is related to decision making and problem solving. Decision-making ability and problem-solving ability are two of the main axes of the theory of multiple intelligences. Problem solving ability can be called the ability to detect, manage and / or regulate a stressful situation and the movements that accompany it. According to Heppner, the effectiveness of a problem-solving activity is seen as the extent to which these actions facilitate or hinder progress towards solving the problem. Depending on the degree of progress, problem solving strategies can be divided into two categories of effective and ineffective strategies.

In the last century, research has suggested that cognitive efforts are always effective, while emotional strategies are still ineffective. It should be noted, however, that the study of effective and ineffective strategies has been limited in its scope and in the choice of basic parameters. Recent research, such as that of Averill (2000)<sup>31</sup>, shows that optimism, hope and emotional intelligence positively influence the process of adaptation and the ability to solve problems. This research shows that if used accurately and adaptively, emotions help reasoning, information processing, and problem solving by prioritizing thought, shaping memory, and facilitating creativity. Emotional strategies can be effective if they are used effectively, but these same strategies can be ineffective if they are not used appropriately to solve the difficulties of life. These results underlie a new paradigm of understanding of human intelligence and its role in individual well-being.



**Linguistic retention**

**Towards a definition of retention**

The definition of retention in the French dictionary Larousse (2015)<sup>32</sup> is detailed below, the third example of which interests us:

- excessive accumulation in the body of products that should normally be eliminated;
- a phenomenon whereby precipitation water does not immediately reach watercourses (glacial retention, nivale, retention of scree, permeable terrain). [Retention causes a shift between precipitation and runoff.];

It is interesting to note that in the English Merriam-Webster dictionary (11<sup>th</sup> edition), retention is defined in four different categories, of which the fourth category is related to language learning. The definitions, categories and examples are as follows:

- the act of keeping someone or something. Examples: Recruitment and retention of good employees. Retention of profits from all sales,
- keeping extra fluid, heat, etc. inside the body. Examples: pills to compensate for water retention. Fluid retention;
- the ability to keep something. Example: the fabric has good color retention. [= the colors of the fabric do not fade],

As we can see, when we talk about language retention capacity, we are talking about the ability to remember what has been learned over a long period of time. It is clear that the concept of language retention capacity is therefore related to memory.

**Retention and memory**

In order to study the relationship between linguistic retention and memory, we must consider the types and categories of memory studied by psychologists and neuroscientists. In addition, we need to know the definition of each of these categories. Figure 1 below shows a simple categorization of the memory.

As we can see in Figure 1 above, there are three main types of memory: sensory memory, short-term memory, and long-term memory. According to Carlson, Betteridge, Kisiel, Settles, Hruschka, & Mitchell (2010)<sup>33</sup>, sensory memory is the memory of five human senses: sight, hearing, taste, smell, and touch. This type of memory allows humans to retain impressions of sensory information. This memory is just long enough to be

sent in short-term memory. Short-term memory is the ability to store and manipulate a small amount of information. The duration of this memory is measured in seconds.

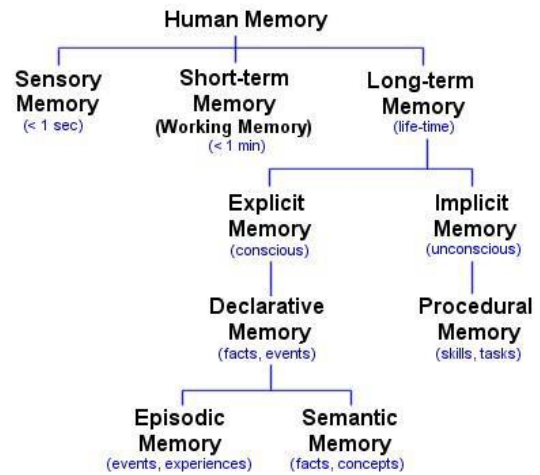


Figure 1–Types of human memory–Diagram adapted from Mastin (2018)<sup>34</sup>

**Memory and learning**

Learning is defined as the assimilation and processing of new knowledge and skills, their transfer via short-term memory to long-term memory, and then their reuse in another context. When there are breaks in learning, teachers may question their practices, the education system, and learners. As a result, teachers often begin to look for ways to make lasting improvements in learner knowledge. This brings us to the concept of knowledge, defined as familiarity with a certain subject, the ability to produce new material using information on that subject, as well as the ability to adopt appropriate strategies and solutions in a situation difficult or problematic. An example of language learning would be: if we know the meaning of a word in many different contexts, if we can use it on purpose, and if we can think of appropriate substitutes for the word when its use is inappropriate or the public has difficulty understanding it, then it can be considered as a knowledge of that word. Therefore, when as educators we are concerned about making knowledge sustainable for learners, the first step is to check that they have integrated the material.

*Grammatical retention*

With respect to grammar and syntax, the two learning procedures discussed before "deliberate and accidental learning" are again of great importance. According to older research such

as Bialystok (1981)<sup>35</sup> an intentional or conscious learning process is necessary if language learners are to produce the correct forms and use them appropriately. If we consider this to be right, then the errors are the result of not knowing the rules of the target language, forgetting them or not paying attention to them. However, according to Al-Hammadi (2012)<sup>36</sup>, there is little theoretical support for the most traditional form from this point of view; no current theory considers the conscious study of grammar as a necessary or sufficient condition for language learning.

### **Retention: factors and strategies of language learning**

#### *The role of culture and the environment on language retention*

According to Gardner (1979), the social and attitudinal factors that influence the acquisition of a second language may also have an effect on the subsequent retention of that language. A study by Edwards (1962)<sup>37</sup> shows that the long-term retention of linguistic and communicative skills in a second language for bilinguals is a function of successful initial or initial learning, the possibility of using the information initially acquired, and of interest in using this information. Previous research has focused on the social factors of language acquisition rather than retention of language. However, since retention depends on language proficiency, the factors that affect competence will also affect retention. According to Masgoret and Gardner (2003), these social factors include a positive orientation towards the language group, a positive attitude towards the learning situation and the motivation of the learner.

According to Wendel's (2005)<sup>38</sup> definition, the "ecological" approach to language retention takes into account the complex network of relationships between the environment, languages and their speakers. (pp. 51-76). In order to fully take into account the interrelationships between these three factors, account must be taken of the basics of objectives and human relationships. In this respect, education plays a key role.

### **Factors Influencing Language Retention**

#### **Factor 1: Language Learners' Needs**

According to Wesson (2012)<sup>39</sup>, we tend to remember what we need in our lives: these needs may stem from personal interests and / or educational and vocational training requirements (para. 24). We learn and recall things more easily if we have been exposed to similar things before, if we

met them in a context that we understood, and / or if they were emotionally important to us. We can say that it is beneficial for educators to be attentive to learners' future educational and professional goals, as well as to the topics they value, because integration can increase the ability for learners to keep what they are learning. They learned for a longer period of time.

#### **Factor 2: language and identity**

According to Elaha's definition (2003: 90)<sup>40</sup>, maintaining a language is achieved by exposure to the culture of the target language. In a research he conducted in German as a foreign language courses, learners said that being involved in the challenges of German culture and, as a result, they became interested in learning the language and developed a sense of a new identity.

#### **Factor 3: variety and creativity**

According to many studies such as Tilman, Wedin and Knope (1996)<sup>41</sup>, increasing diversity increases learning stability. In terms of language sustainability, the diversity of languages and curriculums maximizes the chances of learners' success. When learners are exposed to a set of facts multiple times, in different forms and in different contexts, their knowledge moves from a purely theoretical construct to a more practical construction. For example, for better vocabulary retention, the meaning and definitions of words, the creation of links between words, the construction of semantic networks, maps, graphics, organizers, and graphic displays help students remember vocabulary for later use.

#### **Factor 4: Motivation**

Gardner, Lalonde, and MacPherson (1985)<sup>42</sup> demonstrated the importance of motivation in maintaining second-language skills and performance over a long period of time. Drawing on previous research, including Edwards (1977), they have identified three broad categories:

- the initial level of competence,
- motivation, and
- The use of language has an influence on the improvement of long-term retention.

Among the factors they examined, we find the initial level of competence as a factor, the role of language use. In the promotion of retention and the use of language.

#### **Activities based on IM and language retention**

According to Gardner (2006), verbal and visual coding, the use of mnemonic images and aids,

development, and in-depth communication allow humans to retain information in a variety of ways. Al-Hammadi (2012) confirms:

Awareness tasks are easily designed through problem-solving tasks or activities that can create the opportunity to use the [second language] from a student's perspective. Teaching tasks, which include carefully designed crossword puzzles, games or grammatical self-discovery tasks, may or may not take place in the classroom. Since students' awareness of the linguistic characteristics of [second language] is more an internal than an external process, it is suggested that these tasks be performed outside the classroom with the possibility of extending the tasks in the classroom. The ideal platform for the creation and use of such tasks or awareness activities is the computer, and the targeted forms or structures may be the most problematic in [second language]. (Page, 42)

#### Educational implications

We hope to provide a methodology that will help learners to develop their language skills more effectively while stimulating their creativity and motivation. In an educational context, these objectives can be taken into account by meeting the needs of all learners. For these reasons, we believe that students would benefit if teachers considered teaching and teaching their subjects based on the theory of multiple intelligences.

At the same time, learner centered teaching is spreading and teachers may want to spend more time with their students to observe them, talk to them, and learn about their fears and hopes for learning, as well as their educational and career goals. By providing a strong theoretical framework and a set of proven tools, such as the Midas test, TIM can help teachers and learners better understand their own strengths and weaknesses as well as those of others. It can also provide policy makers, teachers and administrative staff with an opportunity to test a collaborative and collaborative approach.

One of the most important benefits of MI theory is to establish a separate and detailed profile for each learner as an individual. Assessments incorporating TIM, regardless of domain, may be based on these profiles, opening the door to a more accurate learning and evaluation system.

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