

NEUROLINGUISTICS AND ADULT SECOND LANGUAGE LEARNERS
NEUROLINGÜÍSTICA Y ADULTOS QUE ESTÁN APRENDIENDO UNA
SEGUNDA IDIOMA

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Abstract

This article analyzes the process of learning a Foreign Language in adults regarding neurolinguistics. In order to, carry out this research different scientific articles were deeply reviewed towards understanding the nature of the phenomenon. Initial findings revealed elder users have established remarkable maturational changes due to neuronal connections. Hence, adult second language learners could achieve significant learning outcomes if a number of useful principles are applied, which will contribute to an adult's teaching and learning process.

Keywords: Neurolinguistic, learners, cognitive, language, native

Resumen

Este artículo analiza el proceso de aprendizaje de una lengua extranjera en adultos en relación con la neurolingüística. Para llevar a cabo esta investigación se han revisado en profundidad diferentes artículos científicos con el fin de comprender la naturaleza del fenómeno. Los resultados iniciales revelaron que los usuarios mayores han establecido notables cambios madurativos debido a las conexiones neuronales. Por lo tanto, los estudiantes adultos de segundas lenguas podrían conseguir resultados de aprendizaje significativos si se aplica una serie de principios útiles, los cuales contribuirán al proceso de enseñanza y aprendizaje de un adulto.

Palabras claves: neurolingüística, aprendices, cognitive, lenguaje, nativo.

Introduction

Learning is a process that is present in almost all stages of life, from the time we are children to old age, nevertheless when you are an adult the difficulties or obstacles to learn something are more recurrent, this to several factors both physical and cognitive, however, this is not an impediment for those adults who yearn to broaden their horizons and improve their skills. More and more older people are deciding to learn new things, including a new language, as they have realized the benefits of being able to communicate in another language, learn about new cultures and meet the demands of a globalized world.

In this sense, teachers must know how to guide an adult learner, in such a way that it is important to recognize their differences, needs and interests, in order to develop those competencies that allow them to develop and make use of the linguistic faculty in a foreign language in an appropriate way. That said, the purpose of this paper is to study the adult population, the physical and mental changes they have along with maturity and how they learn a second language.

Literature review

Foreign language learning in adults

Adult learning is a process in which different skills, competences and even behaviors are acquired. Adults have distinguished themselves for being independent, direct and focused, however, it is not easy for them to create new ideas or replace old ones. As for the acquisition of a new language, it is a laborious but not impossible work, it requires effort, mental agility, interest, but above all

motivation since learning a foreign language is a process that is not easy to carry out, however, through conscious practice and the use of good tools, important results can be achieved.

When an adult try to learn a language, he does not always do it naturally, by imitation or by the environment around him as it usually happens with children, unlike them, when an adult decides to learn a new language they must learn the four main skills such as oral-written expression as well as listening-literary comprehension. These skills are connected and it is not possible to develop one skill without the other, as Cassany explains.

Neuronal connections:

The brain is a very complex system, from a healthy perspective it has the potential to regenerate itself and produce new neurons, thus creating millions of communicative bridges between them allowing a meaningful learning process to take place. The phenomenon described above, known as synapses, is what reinforces all knowledge in the brain.

In other words, the synapse is a complex biological process that involves different elements and parts of the brain. According to Thomas C (2018)

Synapses are intercellular junctions specialized for fast, point-to-point information transfer from a presynaptic neuron to a postsynaptic cell. At a synapse, a presynaptic terminal secretes neurotransmitters via a canonical release machinery, while a postsynaptic specialization senses neurotransmitters via diverse receptors (p.276).

Brain deterioration

It is evident that the whole organism changes over the years, the brain is clearly no exception. The loss of memory, reasoning, retention and cognitive capacity is becoming less and less, however, it is not the only, from an anatomical perspective it is also affected, according to the author Peters (2006) in the article *Ageing and the brain*.

It has been widely found that the volume of the brain and/or its weight declines with age at a rate of around 5% per decade after age 40 with the actual rate of decline possibly increasing with age particularly over age 70. The manner in which this occurs is less clear. The shrinking of the grey matter is frequently reported to stem from neuronal cell death but whether this is solely responsible or even the primary finding is not entirely clear.

The nervous system

The nervous system is in charge of processing all the stimulus that we perceive to later generate a reaction, this system composed of many elements is responsible of many of our activities such as breathing, writing and even acting.

The nervous system develops during embryonic life, the human being continues to create connections in the first years of life, later with the passage of time knowledge and various cognitive skills are acquired, which maintain active functioning, it is composed of nerve cells or neural networks that are connected to each other, however, they are not renewable unlike other systems or organs of the body, which despite the years continue to function without major problems.

Andragogy

To speak of andragogy it is necessary to make a distinction between it and pedagogy, since andragogy is the art and science of helping adults to learn, while pedagogy is the art and science of teaching children, starting from this distinction it is clear that the differences are quite large, in andragogy learning is self-directed, the experience that the student has is a very valuable and useful

resource for the learning process, motivation is based on internal incentives and not on external rewards as it happens with children, these are other differences, just to name a few.

However, defining this term is not a simple task, since over the years it has had various connotations in different countries. Here are the 3 main meanings of this term according to Jost Reischmann:

1. In many countries there is a growing conception of 'andragogy' as the scholarly approach to the learning of adults. In this connotation andragogy is the science of understanding (= theory) and supporting (practice) lifelong and lifewide education of adults.
2. Especially in the USA, 'andragogy' in the tradition of Malcolm Knowles, labels a specific theoretical and practical approach, based on a humanistic conception of self-directed and autonomous learners and teachers as facilitators of learning.
3. Widely, an unclear use of andragogy can be found, with its meaning changing (even in the same publication) from 'adult education practice' or 'desirable values' or 'specific teaching methods,' to 'reflections' or 'academic discipline' and/or 'opposite to childish pedagogy', claiming to be 'something better' than just 'Adult Education'. Terms make sense in relation to the object they name. Relating the development of the term to the historical context may explain the differences.

Principles for the adult learning process

Motivation: Learning a second language when you are an adult can be frustrating, since you do not get the results you expect in a given time, so it is important to encourage students and motivate them to continue learning despite the obstacles that may arise.

Autonomy: Adults are characterized by being autonomous, since most of them want to learn by their own means, in this case the teacher should provide the necessary tools and material, while the student is in charge of the development of their process.

Experiences: Adults throughout their lives have lived many experiences, which have shaped them and widely influence their way of thinking, this is how all of them will be taken into account in the middle of their second language learning process.

Active participation: This element demonstrates the adult's commitment to the process, in addition to allowing the teacher to highlight the student's shortcomings and weaknesses. In the learning of a second language, it contributes significantly to the management and development of communicative skills.

Methodology

This article is based on mix research since it explores both qualitative and quantitative data. This research analyzes social phenomenon investigated from documentary researcher papers in which the incidences of neural connection in Adults second language learning might be determined.

Sampieri (2014) points out that the goal of mixed research is not to replace quantitative or qualitative research, but to use the strengths of both types of inquiry, combining them and trying to minimize their potential weaknesses.

The research process in the teaching-learning process in adults requires a mixed approach for its analysis, based on the combination of quantitative and qualitative methods, throughout the article it has been necessary to show the differences in the learning of adults and children, a thorough analysis was made of how the brain works in each of these, the emphasis was made on the learning process without neglecting the teaching process in order to raise awareness that you can not teach in the same way in which a child is taught. It is evident that this dual teaching-learning approach is intrinsically linked to the teaching-learning process Allan (1998) who state that “whatever short- term inconvenience this may cause, in many cases the reappraisal and reanalysis required can reap long-term analytical rewards: alerting the researcher to the possibility that issues are more multi- facted than they may have initially supposed, and offering the opportunity to develop more convincing and robust social explanations of the social processes being investigated”. (1998, p. 61)

Specific objectives.

1. To identify Adults Second Language learning features.
2. To analyze the impact of neuronal connections in Adults Second Language learning
3. To determine whether implementing innovative strategies enhances Adult learning.

Discussion:

The learning process of adults is significantly different when they are learning a second language, the non-success of many adult learners to acquire native linguistic features is often associated with the maturational changes in the brain such as late immersion, misunderstanding instructions, lack of motivation, brain plasticity, insecurity etc.

However, today, thanks to science, there are a large number of studies which have shown the impact that adults have when they learn a second language and as a result we can evidence that the processes are not necessarily less rewarding or beneficial.

Nevertheless, there are situations and difficulties which make the acquisition process more challenging. Adults learners are autonomous, self-directed, and always expect respect and equal status. “The difficulty lies not so much in developing new ideas as in escaping from old ones.” They focus mainly on immediate implementation of knowledge and are reluctant to learn new things (Prakash, Sharma, and Advani 2019).

Consequently, it is important to understand how the brain works in the middle of the learning process. The brain is the driving mother organ of the whole organism; it regulates each of our functions from the simplest to the most complex. It is composed of several parts, all of which are extremely important, the number of functions that can be performed thanks to this organ are countless, as well as the skills that can be developed. Its processing unit is the neuron and the human being has millions of them, each one of them is unique and they are connected to each other, in order to transmit information and to carry out the actions. According to the Llinas law it

can be stated that: Given a neuron of a certain type cannot be functionally replaced by a neuron of another type, even if its synaptic connectivity and type of releasing neurotransmitter are identical. However, as time goes by, the brain, as well as all parts of the body undergo changes, that is why neuronal plasticity is important because it presents modifications together with the decrease of functional capacities, for this reason learning a new language seems a really hard process.

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