

Educational Public Policies on English Language Teaching in Brazil Based on Neuroscience and Psychology of Human Development

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Abstract

The present study aims to reflect on the teaching of the English language in the initial grades of public and private network schools, it is considered that the offerings in public schools occur from the second phase of Elementary School, while in private school begins in Early Childhood Education. Through the qualitative method, it is sought to emphasize the relevance of the English Language and to point out the importance of insertion of this Language still in early childhood, to contribute to the fight against educational inequality in Brazil. It highlights in this bibliographic study questions pertinent to neuroscience as well as learning. The theoretical and methodological basis used in the research is based on theories of scholars such as Guyton and Hall, Watson, Skinner, Battro, Wallon and Vygotsky. The results showed that the early childhood learning process is flawed due to the moment the English Language is offered in public schools and the first step towards the reversion of this panorama may be through reflection with the attempt to change the current scenario.

Keywords: Reflection; English Language; Offer; Learning; Basic Education.

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1. Introduction

Learning has been studied for decades and researchers have tried to construct theories that can decipher this process. The importance of this reflection is indisputable, since it is a resource for acquiring new knowledge and is considered one of the main functions of human beings and, although it is an explored field, it is one of the greatest challenges for Education in Brazil. In the age of globalization, the importance of learning foreign languages is undeniable and priority is given to English, which, although not the most widely spoken language in the world, is the dominant language due to its powerful influence on the world economy. It is the most commonly used language for intercultural communication and offers more cultural and leisure channels. Speaking and writing English have become prerequisites for many job and study opportunities and should be understood as a new possibility to see, understand the world and build meanings. In this perspective, it is obvious that English is inserted since early childhood education, because English is of great importance in many aspects of the world market, as the market is highly competitive and innovative. This language started to be considered a priority in the contemporary world and brought benefits for learning English, in addition to Portuguese, knowledge of the English language is also necessary. This term is used to refer to the language process involved in the language. This work is called "language learning". This process is supported by the theory of the American linguist Steven Krashen, who defines learning as derived from the conscious process of formal knowledge. "This type of language is a learning that can only be achieved through intellectual effort" ^{1, 1}. According to Krashen, a person can develop competence in a second language in two ways: through acquisition or through learning. The acquisition of a language occurs through a subconscious process, similar, if not identical, to the way in which children develop their ability in the first language and learning (learning) refers to the conscious knowledge of a second language, the knowledge of rules, being aware of them and being able to talk about them [7]. The problem that guides this work is based on the problem of Brazil waking up to insert English in the educational curriculum. From the sixth year of elementary education in public schools, the Ministry of Education (MEC) made important changes to the national education foundation and foreign language requirements. Despite these regulations, the English level of these students is not satisfactory. On the other hand, in private schools, English teaching has been used since early childhood education, which offers opportunities for children from small to large to have contact with English. Therefore, we start from the following question: Is there a difference in the level of English proficiency between students from public and private schools? It can be considered that the existence of this hypothesis is due to the fact that both parties provide the time for this language, and this form of reasoning exists, therefore, the objective of this research is to directly promote research and possible changes related to the beginning of the stimulus. The first step towards a country with a more equal education. The methodological path to achieve these goals is guided by learning methods, such as behaviorism, cognitivism, constructivism and social constructivism, as well as neuroscience concepts, in order to emphasize the best time to provide knowledge to human beings. It is hoped that this research will help to understand this fact exposed, thus providing a way for political authorities, teachers and professionals in the region to reflect on English in public basic education.

1.1. Public policies on education

In line with the philosophy of educational work, the LDB - National Education Guidelines and Bases Law

provides the student with the theoretical framework to achieve, in practice, the effectiveness of teaching the English Language. According to this law, better known by the acronym LDB, the teaching of at least one foreign language must be applied compulsorily from the sixth year of schooling and extends to high school in public and private schools. found in article 26, 5th paragraph LDB [4], while in private schools the Foreign Language is offered since Early Childhood Education. Therefore, public school students fall behind on their first exposure to the language, as most private schools offer learning in some areas of academic knowledge, including encouraging the use of English since early childhood education. BNCC - The National Public Curricular Base stipulates: "All Brazilian students must have the opportunity to enroll during school life and stipulates that English should be taught at school with a "character formation" [2]. About this, the PCNs - National Curriculum Parameters of the Foreign Language, from a pragmatic perspective, that: The development of communicative skills, in more than one language, is essential for access to the information society. In order for people to have more equal access to the academic world, the business world and the world of technology, etc., it is essential that foreign language teaching be understood and implemented as teaching that offers indispensable work tools [17].

1.2. Reality of english language teaching of public and private schools

It is known that there are problems in Brazilian Education, the reality experienced in the classrooms points out some negative factors, among them are: low salaries, frustrated teachers who run into daily classroom difficulties, parents who do not participate in their children's education, among many other aggravating factors. Private schools are part of an education provided by a private for-profit entity and although the state straits standards of education they have no universal character, so they become more autonomous. Public schools, on the other hand, because they are government-sponsored institutions must offer teaching directly stipulated by the government, according to the Law governing it. From Narrative 14 in the book "English in public schools DO NOT work: one issue, multiple looks", a student reports his experience in public school and who was looking forward to the first contact with the English language in elementary school and points out, through testimony, his disappointment with the teaching of the English language in the public school, exposing frustration in the face of the teaching/learning of the language in the public institution. "We had the illusion that we were going to learn English at school, an illusion destroyed that same year, when I realized that spending the whole year studying the alphabet would not lead me to the realization of my desire to speak at least a few words in the language of the songs that I liked to hear." [18]. *The narrator exposes his disappointment of waiting so long to study the English language and carry this frustration to high school, where he proved that he would not learn English.*

1.3. Neuroscience: early childhood, a great opportunity for learning

According to [10], children are able to learn more than one language even in their first years of life. To insert this knowledge in early childhood (children under six years of age), it would be convenient to stimulate a Foreign Language from an early age, for familiarization with the language.

According to Figueiredo,

The age of the individual is one of the factors that determine how a language is learned. But opportunities for learning, motivation to learn, and individual differences are also determining factors for learning success [19]. It is known that the development of the nervous system begins with intrauterine life and ends in pre-adolescence with the lateralization of the center of the spoken word. This development provides the child with more effective learning than the adult, this is related to the sensory, affective, cognitive and assimilation capacity. According to Guyton and Hall, the Wernicke area is a region of the human brain responsible for knowledge, interpretation and association of information, more specifically the understanding of language, as the quote explains: The sensory area of the dominant hemisphere for interpretation of language is Wernicke's area, and this is closely associated with both the primary and secondary hearing areas of the temporal lobe. This close relation probably results from the fact that the first introduction to language is by way of hearing. Later in life, when visual perception of language through the medium of reading develops, the visual information conveyed by written words is then presumably channeled through the angular gyrus, a visual association area, into the already developed Wernicke's language interpretative area of the dominant temporal lobe [6]. Some memories can only last a few seconds, while others can last for hours, months or years. To discuss this point [6] are based on common memory classifications (short-term memory, medium-term memory and long-term memory), in which they explain the need to integrate memory for switch from short-term memory to long-term memory. Studies show that to increase the transfer of short-term memory to long-term memory, repetition is necessary. Guyton and Hall state:

Psychological studies have shown that rehearsal of the same information again and again in the mind accelerates and potentiates the degree of transfer of short-term memory into long-term memory and therefore accelerates and enhances consolidation [6]. It is true to say that you can learn other languages at any age, but children in early childhood are in the early stages of learning, so they are more likely to learn another language. Scientific research published by BBC News Brasil (British Broadcasting Corporation), proves that there are critical periods in the organization of certain higher functions by the nervous system. The published report [3] BRIGGS (2013) exposes research in which British and American scientists discovered that there is a critical window of formation in the brain between children aged two and four years, during which it is open to a certain type of experience for language improvement and language skills are shown to develop very quickly in early childhood. The experiment was carried out with more than 100 children, with normal brain development. "The immersion of children in a bilingual environment before the age of four offers a better chance for them to become fluent in both languages, the research suggests." Explains the researcher who led the research, Jonathan O'Muirheartaigh, from Kings College. Thus, the insertion of the English language in early childhood would be interesting to obtain better results, due to the human brain developing most of the connections between neurons.

1.4. Learning approaches

According to Oliveira [11], "learning is a process of building knowledge, of developments and skills and of acquiring and/or changing behaviors and attitudes" and [8] defines learning as "any relatively permanent change in behavioral potential". We learn because we are empowered and our brain is designed to assimilate knowledge. Many philosophers, educators, scientists, psychologists, among other professionals, are dedicated to unveiling how learning occurs, from behaviorism, cognitive theories and neuroscience.

In the face of studies on language learning and acquisition, there are several questions and theoretical approaches capable of guiding the investigation of learning phenomena. Among these strands, one can argue according to some authors who played respectable roles such as Watson and Skinner's Behaviorism, Piaget's constructivism, Vygotsky's Constructivism partner, Wallonian Psychogenetics, among others. These authors seek in their work how learning and acquisition take place and structure these processes in stages, ranging from birth to adulthood. In the first half of the last century, Behaviorist theories scientifically explain human behavior. At the beginning of the twentieth century, it branched out in some areas that defended similar ideas, but with divergences. The father of Methodological Behaviorism, John Watson and Frederic Skinner creator of Radical Behaviorism believes that human behavior is defined by stimulus - answers.

According to Skinner himself,

If psychology is a science of mental life - of the mind, of conscious experience - then it must develop and defend a special methodology, which has not yet been done successfully. If, on the other hand, it is a science of the behavior of organisms, human or otherwise, then it is part of biology, a natural science for which tested and very successful methods are available. The basic question is not about the nature of the material from which the world is made or whether it is made of one or two materials, but the dimensions of the things studied by psychology and the methods relevant to them [13].

According to Watson,

“Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take anyone at random and train him to become any type of specialist I might select — doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors.” At the end of the 1960s, Constructivism emerged, Behaviorism was further expanded, Constructivists did not completely contradict Behaviorism they amplified the Behaviorist equation and cognition (reasoning) was added to studies, in addition to stimuli, responses, reinforcements and punishments of Behaviorism. Following Claparède who states that “Intelligence is an adaptation” [1], Jean Piaget defines assimilation and accommodation as the process of this “adaptation”. It would be assimilation, “I) the organism irrevocably unsets and ends up destroying itself. II) the organism accommodates itself to the new environment and manages to produce a new adaptive cycle.” And accommodation, “the result of the pressures exerted by the environment” [1]. In this way, there is a transformation of the subject under the action of the elements of the environment, a structure is modified or created and shows a more qualitative than quantitative approach to the reasoning of assimilation according to Piaget's philosophy. The child needs to be stimulated since teaching should promote development. The main question for Piaget is how do you move from a state of lesser knowledge to a state of greater knowledge? According to Piaget, knowledge is built internally and learning depends on the level of development of the subject, in an interactionist view of learning through the balance between assimilation and accommodation. “On this order of knowledge acquisition, learning can be introduced, that is, it can provoke an acceleration of the acquisition processes.” [1]. According to Jean Piaget's Constructivist idea, the child goes through stages to acquire and build knowledge. Relevant factors for cognitive development are listed, which first passes through

the biological factor, later through experiences and social interactions and ends with the balance of actions. Piaget explains genetic epistemology internally, without depending on scientific frameworks. "The activity of the subject and the construction of his representation of things is studied with reference to a supposed external, objective and stable reality, which is the real as researched by current science." [1]. For [15], there is "an exact coincidence between the child's level of evolution and age. The succession of ages is the succession of progress. Every moment of childhood is a time of addition". Learning is associated with the development of individuality as an affective and cognitive unit of the subjects. Through a succession of stages and conflicts, the study of human development is carried out. An individual's interaction with the biological world does not depend on his mental maturity but on his ability to interact with the existing culture between the subject and the environment. A young child may not be ready to learn grammatical rules, but he can develop listening and pronunciation. According to Vygotsky, organism and environment exert reciprocal influence, therefore the biological and the social are not dissociated. In this perspective, the socio-interactionist is seen as someone who transforms and is transformed in the relations produced in a given culture [12]. In this way, Vygotsky developed the Zone of Proximal Development (ZDP) is the "level that it reaches when solving problems with the help of another person" [14]. You cannot teach a one-year-old to read, or a three-year-old to write. In this way, the analysis of learning is simplified to determine the level of development that various functions must achieve to make learning possible. When the child's memory is developed enough for him to remember the letters, when his attention can be focused on an extraordinary task, when his mind is mature enough to allow him to understand the connection between symbols and sounds, He started teaching children [14].

2. Methodology

This article is a descriptive study since it describes characteristics of a phenomenon, it is a qualitative approach and bibliographic surveys are adopted as a procedure, in order to develop an understanding of the opportune moment to stimulate a second language, focusing on the fertile period of human learning. According to [9], the study carried out is suitable for the bibliographic perspective because it is also characterized as basic research, as it aims to demonstrate learning approaches for the progress of Education in Brazil.

For Moresi, bibliographic research:

"It is the systematic study developed based on material published in books, magazines, newspapers, electronic networks, that is, the material accessible to the general public. It provides analytical tools for any other type of research, but it can also be exhausted in itself [9]". To carry out this, the bibliographic survey was based on analyzes of the literature already published in the form of books, magazines, separate publications, written and electronic press, made available on the internet. Thus, it consists of the basic resource for the studies of course completion works, through which the theoretical understanding of the subject is sought. Thus, it relies on theoreticians and scholars in the field of learning in order to investigate the late supply of the English language in public schools in relation to private schools.

3. Final results and considerations

Awareness is a powerful resource to identify and modify undesirable consequences in Education and this must be an intellectual exercise developed by academics and teachers. This study aspires to the qualification of Education in Brazil through progressive education. It is noticed that the theories under study support effective learning, although none of them specify how the acquisition of the English language works, it is up to the mediator to choose the best teaching/learning strategy, and it is also found that several factors influence the acquisition of the English language. It is also considered that several factors can cause the competence gap between these students, among them: Teacher didactics, adopted methodology, social level, etc. According to empirical data that during the classroom through college internships, PIBID (Teaching Initiation Program) and as a language course teacher, the difference between the English language competence of public-school students and the private network, since it was observed that most students do not have language skills and difficulties that leave gaps that block them from internalizing knowledge. That said, the objective proposed in this study was achieved insofar as it reflects on the moment of the insertion of the English language in Brazilian public schools, where there is a difference in relation to private schools. Thus, this study sought to answer the following question: Is there a difference in English language competence between students from public and private schools? The answer to this question was found in the literature presented in this study and prove that there is a difference to stimuli in early childhood, as they provide greater reasoning skills and facilitate language learning. Even if a child is not able to learn the norms of a language, exposure to this stimulus will have benefits, since the brain develops very fast. The concepts cited in this study show that the hypothesis was proven due to the fact that early childhood was the best time to insert knowledge. It is considered, therefore, that this study makes possible the possibility of deepening knowledge through research with third-year students of High School, who do not study in a language course for analysis of English language competence in order to establish a parameter between them. Awareness is a powerful resource to identify and modify undesirable consequences in Education and this must be an intellectual exercise developed by academics and teachers. This study aspires to the qualification of Education in Brazil through progressive education. Finally, it was possible to perceive that the theories studied attest to the support for effective learning, although none of them affirms which is the best for this process to happen, it is, therefore, at the discretion of the mediator the best strategy according to the needs and objectives of your students.

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