



# The Reading Level in the Cognitive Development of the Students of the Upper Basic



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## Abstract

Reading is considered a cognitive activity that stimulates thought in order to make a pertinent judgment, it has also become a great challenge for students. Reading is one of the primary educational processes in education, it allows knowing the level of linguistic development and reading comprehension. The objective of the research is to investigate the reading level and its association with the cognitive development of the students, of higher basic education of the Fiscal Educational Unit "Carlos Julio Arosemena Tola, during the 2021-2022 school period. A questionnaire was applied that allowed to know the low reading level of the students. A mixed qualitative-quantitative methodology was applied. The results have shown that there are several factors that affect the low reading level, from demotivation to the lack of strategies such as extracting ideas and summarizing what has been read. However, there are tools to enhance critical thinking and analytical skills, in which the guide and strategies used by the teacher must be based on the student's level of prior knowledge to achieve a valuable level of reading comprehension.

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## 1 Introduction

The research was based on analyzing the reading level and its association with the cognitive development of students, reading is an extraordinary tool that allows developing cognitive thinking, recreating the mind, stimulating with greater ease of imagination, in any reader in the different stages of life, leading to good critical thinking, providing security and confidence when speaking, allowing to promote the development of fundamental cognitive skills, such as; compare, define, argue, observe and characterize. Reading comprehension allows students to understand the message of the text, to understand its meaning, through the acquisition of more important ideas and the possibility of establishing links between these and other ideas that have been acquired previously, as well as being the product of of the whole process of understanding, identifying, relating key concepts and organizing information (Miller, 2003; Hofmann, 2006).

Learning to interpret what is being read in higher basic education is one of the challenges for students in which teachers must manage to activate skills, in order to guide them and provide adequate tools (Montesdeoca, 2021). Reading comprehension is determined in two key words that are: efficiency and quality, but for the student to reach a high level of learning he has to understand and analyze and even reflect on the reading at the given moment; however, it is not always possible to understand the message that the text interprets for us, or it can even be understood in a wrong way (Valdez, 2020). The development of reading comprehension is fundamental for students, since this innovative skill allows them to know the valuable processes of meanings of texts, enriching knowledge and improving the skills of acquiring them (Chávez, 2019). Reading comprehension does not occur at the same rhythm, but rather is achieved gradually when reading is done and in this way cognitive actions are obtained (Yana et al., 2019).

When reading comprehension is not developed adequately and the appropriate methodologies and strategies are not used, it influences the development of cognitive skills, word recognition and their association with significant concepts and ideas, obtaining as results students with efficiencies in their learning. . One of the elements to develop the capacities of the students are the cognitive tools that, in the theory of some pedagogues, this concept is essential, understood as an instrument of human activity, whether physical or mental (Andrango Toaquiza et al., 2020). In this sense, reading comprehension is the student's ability to understand what is read, both in reference to the meaning of the words that make up a text or globally. An essential factor for the integral formation of the human being is knowing how to read since this allows levels of development for oral and written expression (Pérez, et al., 2018). Continuously, reading becomes a didactic learning tool for students, expanding the information they receive in this way, interpreting their knowledge from all the content read (Moghadam et al., 2012; Pearson & Gallagher, 1983).

For Chavez-Paredes et al. (2019), they affirm that from the sixties the need arose to promote reading ability and comprehension, using different study methods, considering Regular Basic Education as a starting point, Yana et al. (2019), maintain that students are actively training, resulting in a dynamic interaction between their innate and acquired capacities, including those influenced by their context, adding the connective context where the student develops. In some countries, students have been evaluated through the PISA test, which measures the ability to use knowledge and skills in situations of daily life in which reading skills are incorporated; however, the results shown in the evaluations have not been satisfactory (Silva & Santiago, 2021). In Ecuador there is no evidence of current data on the reading behavior of its inhabitants; however, the last survey carried out in 2012 by the National Institute of Statistics and Censuses of Ecuador (INEC), reflected that the majority of readers are in the group between 16 and 24 years old. Since 2016, the Ministry of Education implemented a reading program "I read", in order to encourage (Ministry of Education, 2021).

Ecuador registers low levels of reading comprehension due to different factors that affect their reading comprehension from the difficulty of the students because they do not use strategies to understand the meaning of the text, cognitive problems and the sociocultural context that is related to the influence of the elements. that motivate students in reading (Guaman, et al., 2020). In this sense, metacognitive strategies require the reader to plan knowledge in order to achieve an understanding of the text either through various

tasks implemented in the classroom (Campoverde & Jumbo, 2022). Thus, reading involves various processes and resources in which the cognitive and linguistic are involved, allowing a link to be established as part of an interaction between the reader and the text (Valdez JL, 2021).

When speaking of the level of reading comprehension, he is referring to the degree of development that the reader reaches through obtaining, processing, evaluating, and applying the information implicit in the text (Cervantes-Castro et al., 2017). In this sense, reading and writing are considered a fundamental part to develop consecutively more elaborate levels of thought, communication and positive interaction with others and with the environment; which are valuable instruments as part of educational strategies (Ruíz, 2020). In addition, reading comprehension allows for the elaboration of a critical judgment that is observed through reading. The ability to express main and secondary ideas of the text is also considered (Viera Carreño et al., 2021). It should be noted that the teaching of reading is considered a central part of the educational system and a learning tool that promotes the development of cognitive skills in students; however, the level of reading competence presents difficulties that have been evidenced in the basic and secondary courses, such concern for the lack of fluency when reading and presenting a text argument (Arenas Parada et al., 2021). As has been approached, reading involves different processes at various levels, which is why developing reading skills enhances the habit and practice of reading, not only educational; but also social (Márquez, 2017). In contrast, some studies have shown that reading is beneficial for school performance, it also has a direct relationship with comprehension, vocabulary expansion and reading speed due to the motivation and pleasure that students feel for reading autonomously; in this way they know more about a topic of interest that they can enjoy and raise their reading level (Lluch & Sánchez, 2017).

Cognition and metacognition are related to the reading process and metacomprehension; This is how some mental skills are needed that act as a basis for the understanding and interpretation of written signs (Herazo, 2017). From a cognitive perspective, reading is carried out by processing at different levels, ranging from basic processes of grapheme perception, word recognition and assignment of syntactic functions to the words that make up the sentence, to higher level processes such as the integration of the meaning of the sentences that form a discourse and the making of inferences (Gallego et al., 2019). Some of the strategies that are used by students is the extraction of information which obtains relevant data from a text, allowing them to search for the most relevant, as well as select ideas. Therefore, the human being, in addition to strengthening cognitive processes, develops attention and memory; where the student stimulates the information then stores and encodes it (García & Mogollón, 2020). In short, reading forms a constructive, situational and strategic process, which is oriented towards textual comprehension that is related to ideas, linguistic skills and reading ability (Figueroa Sepúlveda & Gallego Ortega, 2021). The human being has continuously developed tools to facilitate and improve their physical and mental work, using them amplifies the intelligence of the individual and reorganizes the mind (Aparicio Gómez, 2018). In a globalized world, it is relevant to implement virtual learning environments because it facilitates the knowledge process and the development of student skills by facilitating cognitive processes (Novoa et al, 2021). Thus, some of the digital resources that can be used are interactions, templates and educational platforms that allow the development of reading skills (Sykes, 1990; Swanson, 2001).

## 2 Materials and Methods

An investigation was carried out to obtain and propose strategies that lead to improve the reading level in the students of Basic General Education of the "Carlos Julio Arosemena Tola Educational Unit". It has been assessed that student have little interest in reading, they show a lack of motivation, few study habits, when reading, they do not apply reading techniques or strategies to understand the reading or the most important ideas within a text, hindering cognitive development, making them unable to understand what they read. The research was developed during the 2021-2022 school period, in students of higher basic general education, in which a mixed methodology (qualitative - quantitative) was applied. Both of which were useful to be able to identify creative techniques to investigate the reading level in cognitive development, which served as the basis for the inquiry, and direct observation in which two instruments were applied was also valuable (Atance & O'Neill, 2001; Schacter et al., 2017). The study involves a quantitative analysis, so surveys were applied to students and to obtain information from teachers, an interview was applied that is essential for the study. In

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the same way, the search and selection of information was carried out through databases such as Google Scholar, Scielo and Redalyc, through a search strategy of reviewing primary sources with scientific evidence (Dubois & Prade, 1992; Yu et al., 1994).

### 3 Results and Discussions

The information obtained in the investigation allowed to have pertinent information, which served to carry out an exhaustive analysis and its results allowed to contribute to the educational system. For this reason, a survey was applied to students during the 2021-2022 school year, the results of which reflected the fulfillment of the proposed objectives. The interest in carrying out the following study was born with the purpose of investigating the reading level in cognitive development; also analyze the interaction of students in processes of attention, perception, memory and consciousness that are important for learning as in the understanding of reading. For this reason, with the proposed objectives, the following questions were asked to the surveys, from which the following results were obtained. Table 1 shows if they use the technique of underlining the most important ideas and data from the reading.

Table 1  
Use the technique of underlining the most important ideas and data of the reading.

Alternative	Frequency	Percentage (%)
Yes	2	20
No	1	10
Sometimes	7	70

The students responded related to the query if they use the study technique of frequently underlining the ideas and important data of the reading, 20% of the students consider that "Yes", while 10% consider that "No" and 70% mentioned that "Sometimes", based on this result it can be considered that this percentage is the highest and that there are few students who use the appropriate techniques when they are reading. Although it is necessary from the basic level to teach students different ways of how to understand reading because these can have influences in later years, it was consulted if they write the important data and the fundamental or difficult to remember ideas, obtaining the results as shown in table 2.

Table 2  
Write the important data and the fundamental or difficult to remember ideas

Alternative	Frequency	Percentage (%)
Yes	3	30
No	3	30
Sometimes	4	40

According to the results obtained, 30% of the students indicated that "Yes" they write important data and ideas that are difficult to remember, likewise the other 30% mentioned that "No" and 40% mentioned that "Sometimes". It is significant that when a reading comprehension is carried out there is a visual recognition of the text and graphics in the students so that there is retention in the memory of certain data that are difficult to remember. It was investigated if at the end of the reading they try to mentally summarize what they read, showing the results in table 3.

Table 3  
At the end of a reading, they try to mentally summarize what they read

Alternative	Frequency	Percentage (%)
Yes	3	30

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No	5	50
Sometimes	2	20

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Of the respondents, 30% mentioned that at the end of a reading “Yes” they try to mentally summarize what they read, while 50% said “No” and 20% “Sometimes”. According to the results, the majority of the students do not mentally summarize what they read in the texts; in this way it is considered that the students do not summarize the texts due to the lack of understanding and analysis; for this reason, it is essential to develop language skills in the educational institution from basic. Through the results obtained and interpreted from the research, it is shown how the students of higher basic education do not all use reading strategies for the development of their reading capacity, which are important since they help in the acquisition of new knowledge, as well as also the reinforcements and in the same way it helps self-learning throughout their student life. In contrast, many studies have shown that new advances in information technology and telecommunications (ICTs) help creativity and language skills encourage students to invest more and more in their learning (Guillén & Maldonado, 2019).

Reading is part of daily life, for this reason some students continually reflect reading behavior, including motivations, emotions and other appreciations of the individual that influence the sociocultural context (Alvarez Trujillo, 2021). In this way, it is significant to seek to establish the level of reading comprehension of students and its possible relationship with school performance. It has been evidenced through the investigation that the difficulties that arise from the reading level are the level of critical understanding since it is very little practiced by the students when issuing arguments about the read text such as developing their own ideas. As evidenced in some studies, the comprehension of a text is a highly demanding cognitive task which implies a continuous process of extraction and construction of knowledge that is related to different reading processes (García-García, et al., 2018). In addition, cognitive processes configure some mental representations that involve relationship schemes which allow information to be encoded, synthesized, and stored (Manrique, 2020).

With the results achieved, it is shown that in the research there is a relationship with the reading level, comprehension and intelligence, for this reason that reading needs skills, abilities and cognitive actions to be able to acquire understanding and knowledge of the text. Cognitive development and reading level are essential in the training of students because they influence student performance. The learning that is acquired through reading is essential for school success, allowing performance in different tasks that reveal basic processes such as decoding, comprehension and meta-comprehension. With the findings obtained from the students of "Higher Basic Education" of the "Carlos Julio Arosemena Tola" Educational Unit, it has been shown that several factors affect the reading level from demotivation to the lack of strategies such as extracting ideas and summarizing what is read (Handayani et al., 2019; Hidir et al., 2021).

## 4 Conclusion

The reading level in upper basic students is decisive to develop cognitive capacity and thus continuously acquire knowledge, in such a way that one of the main academic activities in upper basic education is reading, and it depends mostly on strategies and reader resources. Teaching tools should be used to strengthen skills such as analyzing, extracting ideas, synthesizing, recognizing, deducing, looking for the meaning of words and having an argument, which allow good results in reading comprehension, thus having the ability to reason, in this way that With these actions, the comprehensive development of skills is promoted, thus students achieve their autonomy and reach cognitive levels

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