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READING COMPREHENSION, LEARNING STRATEGIES, AND INTELLECTUAL STYLES IN BRAZILIAN HIGHER EDUCATION

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ABSTRACT

Based on the Information Processing Theory and the Mental Self-Government Theory, this study aimed to evaluate reading comprehension, learning strategies, and intellectual styles in higher education. Three instruments were used: the Cloze Test, the Learning Strategies Assessment Scale (EAVAP-EM), and the Thinking Styles Inventory-Revised (TSI-R2). The research included the participation of 552 university students. The results placed the sample at the level of frustration about reading comprehension. Regarding learning strategies, the sample scored higher in the subscales of the absence of dysfunctional metacognitive strategies and metacognitive strategies. Regarding intellectual styles, the judicial and legislative styles predominated. Positive and negative correlations were found between the constructs. The results were problematized taking into account the literature in the area.

Keywords: Reading comprehension. Learning strategies. Intellectual styles. Undergraduate courses. Higher education.

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INTRODUCTION

Currently, Brazil is in one of the lowest positions in the Programme for International Student Assessment (PISA), a school assessment program carried out every three years by the Organization for Economic Cooperation and Development (OECD) (Brazil, 2016). This shows that students have been going through the different stages of education in Brazil without overcoming difficulties in terms of skills such as writing, and reading comprehension, among others.

One of the consequences of not overcoming these difficulties can be dropping out of the course since the "2015 Higher Education Census" carried out by the National Institute of Studies and Educational Research Anísio Teixeira (INEP) indicated that the dropout rate in Higher Education in Brazil is alarming (INEP, 2015). The survey conducted by INEP followed the trajectory of students in this stage of education from 2010, when the dropout rate was 11.4%, until 2014 when the dropout rate reached 49% (INEP, 2016). It is also worth noting that higher education in Brazil is still accessible to a small portion of the population. This, combined with the high dropout rate of those who manage to enter higher education, culminates in the low level of education of the population, as demonstrated by data from IBGE, where about the level of formal education of people aged 25, "data from the 2010 census indicated that "49.3% were uneducated or had not even completed elementary school, while only 11.3% had completed a higher education course" (IBGE, 2012, p. 61). Considering these indicators, which demonstrate the state of Brazilian education, studies must consider constructs that can contribute to improving learning in the country. Constructs that consider the development of skills such as reading, the use of strategies to enhance information processing and knowledge construction, and also the mapping of student profiles, allow teachers to better understand the profile of their students about their preferences for studying, which can contribute significantly to changing the Brazilian educational reality. Based on this, this study guided its investigations on the following constructs: Reading Comprehension, Learning Strategies, and Intellectual Styles.

To explain the reading skill, we resort to the etymological meaning of the word read, which originates from the Latin, legere. Among the various meanings, two are fundamental for the distinctions that we intend to make in this work. The first meaning consists of "counting/enumerating the letters and corresponds to the first act of reading: spelling, repeating phonemes, grouping syllables." The second meaning is related to the word "spoon", which "refers to the notion of something already prepared, in which there is a

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predetermined meaning: the reader's task is to understand the meaning of the text given by the author" (Hillesheim et al., 2011, p. 307). Currently, the second conception tends to predominate in research, as it has been highlighted that, in addition to phonetic and syllabic notions, readers must be able to understand the importance of the context that surrounds what is read, as well as the context of the person who wrote the text and the person who reads it (Freire, 2011). To understand what is read, it is essential to take into account several skills, such as language, context, and culture, among others. Thus, it is necessary to consider the reality of the author of a given text, the historical period, the proposed intertextual dialogues, and, in addition, the reality and multiple determinations that involve the reader. In this context, reading and writing do not consist only of memorizing letters of the alphabet and being able to arrange them in syllables to form words and then form sentences; it is, in fact, about going further and being able to reflect critically on what is written and how the information present in the texts is processed (Santos; Fernandes, 2016). Reading comprehension can be understood as a cognitive process that involves two processors: bottom-up and top-down. In the dimension of the first processor, bottom-up, syntactic, and linguistic decoding occurs, while in the second processor, top-down, the meaning and context of the text are attributed. Therefore, for complete reading comprehension to occur, it is necessary for the reading to go through these two processors (Nicholson, 1998; Autor; Lúcio; Miguel, 2016). Due to the different student profiles, in the same course, there are subjects with different levels of reading comprehension. It is estimated that students who have a low level of reading comprehension will have greater difficulty adapting to higher education, and may even drop out of the course.

When reading a text, the reader, in addition to having access to the knowledge that is explicitly systematized in the words of this text, through reading comprehension it is also possible to access another type of knowledge that consists of what was planned by the author to permeate the text and that must be consciously interpreted by the reader, according to the particular meanings. Therefore, it can be said that reading is an interaction between author and reader, since, to occur fully, it requires integrative and constructive processes, and, in this process of interaction, the reader establishes a connection between the distinct ideas present in the text, while in the integration process, the reader relates the ideas of the text with the accumulated knowledge (Gomes; Boruchovitch, 2009).

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Regarding learning strategies, learning has been studied by Cognitive Psychology, with information processing theory standing out in this area. In this theory, learning is understood as a process involved in contextual factors and also internal factors. The latter are directly related to cognitive processes. From the perspective of cognitive psychology, it is considered that the human mind can structure itself based on basic processes of storing information from the environment (Autor; Boruchovitch; Santos, 2009). Given this, learning also consists of the appropriation of behaviors, that is, when learning something, the student must be able to perform new functions, assuming a behavior that was previously impossible to perform, which will mean that he or she has assimilated new knowledge that has been consolidated through memory (Alcará; Santos, 2015; Autor et al., 2016; Dembo, 2004).

Learning strategies consist of means and procedures by which students can learn in a more meaningful and effective way. Such strategies have been widely studied by information processing theory, which has focused on investigating how students obtain, choose, and retain information in their environment. Information processing is explained in an allegorical way, comparing the mind to a machine or a computer; Therefore, three steps guide the process by which information is processed (Alcará; Santos, 2015; Martins; Zerbini, 2014, Autor et al., 2016). In this theory, it is considered that the human mind is capable of processing and memorizing information from the environment. From this perspective, learning strategies are the means and procedures that people use to process and store information more efficiently. This theory aims to understand how students choose, acquire, process, and store the new information they come into contact with (Alcará; Santos, 2015; Dembo, 2004). The term Intellectual Styles was created by Zhang and Sternberg (2005) to contemplate the cognitive and habitual particularities that involve the different processing patterns that are preferred by students to organize, study, and build knowledge, as well as the cognitive patterns used by them to process the new information they receive. This concept was formulated within the perspective of the Theory of Mental Self-Government, as it is understood that intellectual styles are part of how individuals can achieve mental self-control and, thus, govern themselves (Fan; Zhang, 2014). The use of the word government is based on the assertion that the authors explain intellectual style through metaphors, with governments existing in society and the characteristics of these same governments. They intend to demonstrate that there is a relationship between how people organize themselves to govern society and to govern themselves individually.

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However, it is also necessary to highlight that this theory does not seek to identify and classify the intellectual style of each student individually but rather to classify individual style models into dimensions and types that contemplate specific characteristics (Fan; Zhang, 2014; Inácio, 2016; Autor; Trassi; Santos, 2017; Zhang, 2008; Zhang; Sternberg, 2005). Taking into account the importance of the constructs listed for the psychoeducational area and the Brazilian reality, this research, situated in the area of Cognitive Psychology and supported by the Theory of Information Processing and the Theory of Mental Self-Government, aimed to evaluate reading comprehension, learning strategies, and intellectual styles in higher education, as well as to investigate the existence of relationships between these constructs.

METHOD

PARTICIPANTS

552 students from six higher education institutions participated, four of which were state and two federal. Among these students, 49.45% (n=273) were in the 1st year, 23.92% (n=132) were in the 2nd year, 11.96 (n=66) were in the 3rd year and 14.67% (n=81) were in the 4th year, with 66.31% (n=366) students in the Social Sciences course and 33.69% (n=186) students in the Philosophy course. The average age of the students was 22.4 years (SD=6.53), with 18 being the minimum age and 60 being the maximum age. Among the participants, 43.29% (n=239) identified themselves as male and 55.07% (n=304) as female, with 1.63% (n=9) not providing information.

INSTRUMENTS

Cloze Test

The Cloze Test was used to analyze reading comprehension. It emerged in 1953 from experiments aimed at measuring students' reading comprehension ability. It was designed by Wilson Taylor and, from 1970 onwards, it began to be constantly used in research on reading comprehension. The test consists of applying a text with approximately 250 words from which some words are omitted so that the reader can fill in the gaps based on their perception of the text and also on their prior knowledge (Author; Boruchovitch; Santos, 2009).

To perform the correction of the Cloze Test, the literal correction was used, where only the word spelled and accented correctly as in the original text is considered correct.

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For each correct answer, one point is counted and errors are not scored. The classification used to analyze the correct answers and the reading comprehension of the participants was the one proposed by Bormuth (1968), in this classification, three levels appear: Frustration level, instructional level and level, and independent level. The reading ability of the participant is considered to be at the frustration level when he or she correctly fills a maximum of 44% of the gaps, which means that he or she was able to extract little information through reading the text. When the participant gets between 44.1% and 57% correct, the participant is considered to be at the instructional level, which means that he/she was able to extract sufficient information from the text. When the participant gets more than 57% correct on the test, he/she is considered to be at the independent level, which means that he/she can read independently and creatively.

Learning Strategies Assessment Scale for High School (EAVAP-EM)

This is a Likert-type scale composed of 31 items and was adapted by Scacchetti (2013) from the Learning Strategies Assessment Scale for Elementary School (EAVAP-EF) whose authors are Autor, Boruchovith, and Santos (2010). The items that make up the scale allow the identification of the use of cognitive and metacognitive strategies or the absence of dysfunctional metacognitive strategies. Participants must choose to sign one of three points, which are always – worth two points, sometimes – worth one point, and never – worth zero points in the correction. This score is reversed when it comes to the correction of the items of the subscale absence of dysfunctional metacognitive strategies.

Thinking Styles Inventory-Revised: TSI-R2

The Thinking Styles Inventory-Revised (TSI-R2) is a test of individual or collective application for the analysis of intellectual styles. The first version was created by Sternberg and Wagner in 1992 and underwent two revisions until reaching the version used in this research (See validation studies in Sternberg; Wagner; Zhang, 2007). The instrument is still in the validation process in Brazil (Author; Santos; Author, 2018). The inventory consists of 65 items that allow the assessment of 13 intellectual styles (Legislative, Executive, Judicial, Global, Local, Liberal, Conservative, Hierarchical, Monarchical, Oligarchical, Anarchical, Internal, and External). The response to the questions of each item is organized on a 7-point Likert scale, with the following options: “Not at all” (1 point),

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"Not very well" (2 points), "A little" (3 points), "Somewhat well" (4 points), "Well" (5 points), "Very well" (6 points) and "Extremely well" (7 points).

Procedure

After approval by the Research Ethics Committee (opinion no. 82362218.5.3001.0104), the collection was carried out in different locations in each of the universities and the instruments were applied collectively. All procedures are by Resolution 510/2016 of the National Health Council/Brazil and its complementary provisions.

Data analysis

The data were organized in an electronic spreadsheet and submitted to the descriptive (mean and standard deviation data) and inferential (Analysis of Variance - ANOVA and Pearson's correlation) statistics analysis method using the IBM - Statistical Package for the Social Sciences for Windows version 22.0 (SPSS) program.

RESULTS

Regarding the analysis of the sample's reading comprehension, the results were as follows: the average score of the students (n=521) was 19.26 (SD=6.20), with 0 being the minimum score and 33 being the maximum score. Considering that the text used has 46 gaps and the Frustration Level, according to Bormuth (1968) corresponds to less than 44% of correct answers, which in the text "Misunderstanding" corresponds to 20.24% gaps, the sample studied is at this level. Regarding the learning strategies that predominated in the sample, Table 1 presents the results with the mean, standard deviation, weighted mean, and minimum and maximum scores of the subscales.

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Table 1 - Description of the total sample score on the subscales of the Learning Strategies Assessment Scale (EAVAP – EM).

Subscales	M	SD	Weighted Mean	Minimum and Maximum Score
Absence of Dysfunctional Metacognitive Strategies	14.57	6.09	1.12	3 - 26
Cognitive Strategies	13.66	4.13	1.24	1 - 26
Metacognitive Strategies	10.01	1.79	1.43	3 - 14
Overall Score	38.24	8.91	1.23	19 - 61

Source: Authors.

It is noteworthy that the highest mean was found in the Metacognitive Strategies subscale (WM=1.43). The lowest mean occurred in the Dysfunctional Metacognitive Strategies subscale (WM=1.12). Regarding intellectual styles, Table 2 presents the styles, mean, standard deviation, and minimum and maximum scores reported by the participants.

Table 2 – Description of the total sample score in intellectual styles according to factor analysis

Styles	M	SD	Minimum Score	Maximum Score
Judicial	23.64	4.81	6	35
Legislative	23.51	5.82	8	35
Internal	22.68	6.36	6	35
Monarchical	22.31	5.82	5	35
Hierarchical	22.31	5.90	8	35
Liberal	21.83	6.27	5	35
Executive	21.68	4.46	8	35
External	20.73	7.17	5	35
Global	20.47	4.12	10	33
Anarchical	19.51	5.42	6	35
Conservative	19.16	5.91	6	35
Local	18.70	4.99	6	35
Oligarchical	17.37	5.77	5	35

Source: Authors.

Regarding differences in grade levels, considering the constructs presented, no significant differences were found in the Cloze test when comparing the grades through ANOVA and Tukey's Post Hoc test. The same tests were conducted to verify differences related to learning strategies, and considering $F(3,489)=10.877$, $p=0.001$, significant differences were found, with data presented in Table 3, which includes the subscales, grade levels, means, and Pearson correlation values.

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Table 3 – Differences between grade levels regarding learning strategies subscales

Subscale	Grade	M	p
Absence of Dysfunctional Metacognitive Strategies	1st	10.1	0.001
	2nd	11.2	
	3rd	13.6	
Cognitive Strategies	1st	15.9	0.001
	2nd	12.6	
	3rd	12.4	
Overall Score	1st	34.4	0.001
	3rd	37.0	

Source: Authors.

According to Table 3, as students progress through the grades, they score higher on the absence of dysfunctional metacognitive strategies subscale, with the 3rd year (M=13.6) showing the highest score. Regarding the cognitive strategies subscale, the 1st year (M=15.9) scored higher than the 2nd year (M=12.6) and 3rd year (M=12.4). In terms of total score, the 1st year (M=34.4) scored lower than the 3rd year (M=37.0). Regarding intellectual styles, the main differences were found in the Conservative style between the 1st (M=19.29) and 3rd year (M=16.79) and the Executive style between the 1st (M=21.49) and 4th year (M=23.08).

Finally, to verify possible relationships among the analyzed constructs, the data were subjected to Pearson correlation. A negative relationship was observed between the Cloze test and the Local (r=-0.103, p=0.021), Monarchical (r=-0.140, p=0.002), and Anarchical (r=-0.110, p=0.012) intellectual styles. As participants scored higher in these styles, their Cloze test scores tended to be lower. It should be noted that this correlation can be considered almost null. Regarding the Cloze test and learning strategies, the results showed a (negative) relationship only between reading comprehension and the cognitive strategies subscale (r=-0.138, p=0.002). Regarding learning strategies and intellectual styles, Table 4 presents significant correlations.

Table 4 - Statistically significant results of the correlation between TSI-R2 and EAVAP-EM

Styles	Absence of Dysfunctional Metacognitive Strategies	Cognitive Strategies	Total R Values
Legislative		0.211*	
Liberal			0.207**
Hierarchical	0.126*	0.171**	0.254**
Judicial		0.197**	0.167**

Significance Level: *=0.050; **=0.01; ***=0.001
Source: Authors.

Table 4 highlights that there were significant relationships between the learning strategies and some of the intellectual styles. It is worth noting that the discussion of the data, presented below, will seek to highlight the problematization of the data generated...

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DISCUSSION

The results showed that, about reading comprehension, the average score for the general sample was 19.26, which means that among the 46 gaps present in the text used in the test, the participants filled in approximately 19 gaps correctly according to the literal correction method. However, it should be noted that only approximately one point separated the sample from the next level, since considering the text used, the instructional level starts at 20.25 correct answers. It is also noteworthy that the minimum number of correct answers found was 0, while the maximum number of correct answers recorded was 33, which corroborates that in the same course, and sometimes in the same grade, students are at different levels of reading comprehension. This fact reinforces the need for programs and policies that enable the identification of students' reading difficulties and, subsequently, promote their access to practices that enable an improvement in their level of reading comprehension, since this skill is necessary for a good academic and professional education (Cunha; Santos, 2017; Santos; Fernandes, 2016).

Regarding the learning strategies that predominated in the general sample, it was highlighted that the highest average was found in the metacognitive strategies subscales (MP=1.43), while the lowest average was found in the Dysfunctional Metacognitive Strategies subscales (MP=1.12). Metacognitive strategies are suitable for Higher Education, since, in summary, they are processes that involve the ordering of cognitive and behavioral processes through planning, monitoring, and self-assessment, among other resources. These strategies allow students to better control the execution of their activities and, consequently, their learning process (Autor et al., 2016; Ganda; Boruchovitch, 2015).

This result corroborates the research by Autor (2018), in which the author found that, regarding learning strategies, despite the structural and historical difficulties present in Brazilian high schools, students managed to increase the use of metacognitive strategies and decrease the use of dysfunctional metacognitive strategies in their trajectories at this stage of education. These data regarding learning strategies allow us to hypothesize that students are beginning to reflect, plan, and monitor their cognitive and learning processes more from high school onwards so that they enter higher education using metacognitive strategies more than dysfunctional metacognitive strategies.

Regarding the results on intellectual styles, in the general sample, it was found that the highest averages were in the Judicial and Legislative styles. The Judicial style is strongly characterized by its ability to evaluate, that is, students who score higher in this

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style tend to make evaluations about other people, products, and activities. These characteristics become even more evident when analyzing the items on the scale that relate to the judicial style and which were the items in which the general sample scored highest: 20) I like situations in which I can compare and evaluate different ways of doing things; 23) I like to evaluate and verify different points of view; 42) I like activities where I can study and evaluate different views or ideas; 51) I prefer tasks or problems where I can classify the plans and methods of others and 57) I like work that involves analyzing, classifying or comparing things (Fan; Zhang, 2014). The actions that predominate in the items of the judicial style are the following: compare, evaluate, verify, classify, and analyze. Given this, it can be seen that the characteristics of the judicial style are guided by a high critical capacity and ability to analyze situations from different perspectives, that is, most of them tend to compare their performance with that of other people and also to reflect on different pieces of information, relating and contrasting them. In short, a profile with high analytical and critical capacity predominates in the general sample (Zhang, 2015).

In the legislative style, the main characteristic is creativity. Students who use this style more often tend to prefer to make their cognitive processes more complex so that there is a deeper processing of information. This can be evidenced by the items on the scale that relate to this style, which received the second highest score: 5) When I encounter a problem, I use my main ideas and strategies to solve it; 10) I like to play with my ideas and see how far they go; 14) I like problems where I can try my ways of solving them; 32) When working on a task, I like to start with my ideas and 49) I enjoy situations where I can use my ideas and ways of doing things (Zhang, 2015).

This result highlighted the creative nature of the students in the general sample and how they prefer activities in which they have the freedom to insert their ideas when solving problems or developing activities. Based on these characteristics, it can be said that students seek a way to understand and process information in a way that gives them a particular meaning so that they can assimilate it more efficiently.

It is also worth noting that the lowest average in the general sample was in the Oligarchic style, which is marked by the lack of definition of priority between activities and actions, since in this style, it is customary to recognize that all activities have the same level of importance, as well as by the lack of reflection, since it tends to overvalue external opinions to the detriment of one's own opinions. The alternatives on the scale referring to the oligarchic style that received the lowest scores from the students in the sample are the

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following: 27) When discussing or writing about a topic, I stick with the points of view accepted by my colleagues; 29) I prefer to work on a project or task that is acceptable and approved by my peers; 30) When there are several important things to do, I do them first for the people who are most important to me and my peers; 52) When there are several important things to do, I choose the most important ones for my friends and peers; and 59) When I start a task or project, I focus on the parts that are most relevant to my group of friends (Fan; Zhang, 2014).

Since the literature does not yet include research on the intellectual styles of students from these courses, it was not possible to compare these results with students from the same course. Regarding high school students, Autor (2018) found in his research that they scored higher in the Judicial and Legislative/Internal styles, which demonstrates that students also enter Higher Education bringing these characteristics from High School. In Elementary School, in the research by Autor et al. (2016), the main results indicated that the total sample scored higher in the Monarchical style and the Judicial style. Therefore, it is hypothesized that students move from the Monarchical style to the Judicial style as they enter high school. This means that in high school, students abandon behaviors focused on a single objective or a single way of carrying out their tasks, that is, they become more flexible, more critical, and more analytical.

Regarding the differences in the grades taken considering the constructs analyzed, no differences were found between the grades, which allows us to hypothesize that students maintain the same level of reading comprehension with which they entered throughout the courses. However, as they progress through the grades, students begin to use dysfunctional metacognitive strategies less, since third-year students (M=13.6) scored the highest on this subscale. This allows us to identify a trend that expresses that as students progress through the course, they abandon habits such as leaving activities to the last minute, watching television while studying, seeking distractions during class, or getting nervous when performing more difficult tasks.

Another difference indicated by the results regarding learning strategies refers to the use of cognitive strategies. Considering that first-year students scored higher (M=15.9) than second-year students (M=12.6) and third-year students (M=12.4), the data indicate that students reduce the use of strategies such as underlining, rewriting, and copying as the course progresses. According to Marini and Boruchovitch (2014), research conducted in Brazil has shown that students in the early years tend to use learning strategies less,

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and as they progress to the final grades, the use of strategies tends to increase and usually goes beyond the superficial level. The data obtained in the collection of this research are in line with the national research listed by Marini and Boruchovitch (2014) regarding Metacognitive strategies and the absence of dysfunctional (self-harmful) Metacognitive strategies, but, on the other hand, these data were not confirmed about cognitive strategies, since in the courses analyzed, the use of this type of strategy decreased as students progressed through the grades. Regarding intellectual styles, the main differences were found in the Conservative styles between the 1st (M=19.29) and 3rd year (M=16.79) and in the Executive between the 1st (M=21.49) and 4th (M=23.08) year. Given these results, it is hypothesized that as they advance in the series, students abandon characteristics of the Conservative style, such as, for example, following rules and ready-made ways of doing things, following models and old ideas, and following defined routines. On the other hand, they begin to incorporate characteristics of the Executive style as they progress serially, so that they continue to seek to follow appropriate rules to execute actions, study, and carry out activities, but they begin to dislike ready-made models.

Finally, regarding the verification of the possible relationship between the constructs analyzed, a negative correlation was observed between reading comprehension and the cognitive strategies subscale (r=-0.138, p 0.002), since, as the students scored lower on the cognitive strategies subscale, they scored higher on the cloze test and vice versa. As highlighted by Boruchovitch (2007), cognitive strategies consist mainly of more specific actions, such as underlining, taking notes, repeating, and rewriting, among others. Further research is needed to verify this, since, based on this relationship observed between reading comprehension performance and the use of cognitive strategies, it can be assumed that, by decreasing the use of cognitive strategies, students increase the use of metacognitive strategies, which could be related to better performance in reading comprehension.

Correlations were also found between the use of learning strategies and some of the intellectual styles. The Legislative style correlated with cognitive strategies, the Liberal style correlated with the total score, the Hierarchical style correlated with dysfunctional metacognitive strategies, with cognitive strategies, and with the total score, and the Judicial style correlated with cognitive strategies and the total score. This result allows us to hypothesize that the Judicial style is linked to characteristics of both a more cognitive profile and a profile of using strategies in general, while the Liberal style would be more

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linked to the use of strategies in general, the Legislative style stood out as the style with the most cognitive profile, since it presented a correlation only with the use of cognitive strategies, that is, rehearsal, elaboration, and organization strategies. Finally, the Hierarchical style presented a relationship with the use of cognitive strategies, with the use of strategies in general, and was the only one to present a correlation with the use of dysfunctional metacognitive strategies. Based on the results obtained, it is hypothesized that the tendency to establish hierarchies and priorities may lead students with this profile to prioritize tasks and activities to the detriment of others, which ends up culminating in dysfunctional metacognitive strategies, since possibly by prioritizing some activities they may end up leaving other activities to be done at the last minute, studying the day before exams, getting distracted thinking about other priorities, instead of focusing on the activity they are currently doing, among others.

In most of the results discussed above, no research was found in the area with which the data obtained could be compared. From this, the relevance of the present research is highlighted, as well as highlighting that it presented limitations in relation to some points that still require further investigation in order to reach more concrete results.

FINAL CONSIDERATIONS

Knowing the students' profile is necessary, as it allows teachers to select the most appropriate pedagogical practices for a more effective learning process, as well as allowing students to better control their learning process and study habits so that they become self-regulated. By learning more efficiently, students can be motivated not to drop out, since dissatisfaction with their academic performance can lead them to drop out of the course. Therefore, it is concluded that it is imperative to create programs and public policies that help identify the difficulties encountered at first and, subsequently, allow for the improvement of their level of reading comprehension, since a good level of reading comprehension in higher education is related to better learning in the academic trajectory, as well as enabling effective professional training.

Furthermore, given the results obtained, it can be considered that there is a need for further research into the need to seek alternatives, such as leveling programs, public policies, curricular subjects, and the use of learning strategies that contemplate the development of students' reading comprehension level in higher education. Given the budget cuts that education has been suffering, both at the state and federal levels in all

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stages and modalities of education, and also given the reform of secondary education, which removes part of the subjects in the area of human sciences and, by forcing the student to choose an área knowledge to the detriment of others, fragments access to content that is essential for the formation of a citizen, thus, possibly, the level of reading comprehension, as well as the quality of education in the country will become increasingly deficient. For these reasons, it is necessary to look at the importance of more research and corrective measures in the curriculum, mainly so that they contemplate intervention practices in the development of reading skills for better performance of students throughout their academic education, and, consequently, allow these students professional and human success in the society in which they are inserted.

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