


## CONTRIBUTION OF THE READING HABIT OF ACCOUNTING SCIENCE STUDENTS IN THE DEVELOPMENT OF PROFESSIONAL SKILLS


### DEBORAH MARIA DE SOUSA NASCIMENTO

*Federal University of Ceará. Address: Avenida da Universidade, nº 2431  
| Benfica | 60020-180 | Fortaleza/CE | Brazil.*

 <http://orcid.org/0000-0002-2439-1566>  
*maria\_deby@yahoo.com.br*


### EDITINETE ANDRE DA ROCHA GARCIA

*Federal University of Ceará. Address: Avenida da Universidade, nº 2431  
| Benfica | 60020-180 | Fortaleza/CE | Brazil.*

 <http://orcid.org/0000-0002-5782-9579>  
*editinete@hotmail.com*

### ANTONIO RODRIGUES ALBUQUERQUE FILHO

*Federal University of Ceará. Address: Avenida da Universidade, nº 2431  
| Benfica | 60020-180 | Fortaleza/CE | Brazil.*

 <http://orcid.org/0000-0003-2108-3979>  
*antoniofilhoufc@hotmail.com*

### ABSTRACT

This paper aims to identify the reading habit contribution of accounting students for their professional improvement as an accountant using Cloze test (Taylor, 1953) and reading functions scale (Greaney & Neuman, 1990). The research is an exploratory investigation, applied at a university to verify if undergraduate students habit improves their professional skills. The sample is composed by 180 students from the Accounting Sciences course, and it was obtained by accessibility. For data collection, it was applied a questionnaire containing the reading function scale with the following functions: general learning; utility; morality; and stimulation, as well as a text prepared with Cloze technique. The answers were consolidated and analyzed applying the established by the Dicionário de Competência do Contador. Based on the results of the Cloze test it was verified that the undergraduate students present difficulties in textual comprehension. Concerning the reading function tests, the results showed a better use of the Utility and General Learning functions. It reveals that there is a property environment for developing the Accountant skills related to the General Learning and Utility, through reading; however, Morality and Stimulation should be encouraged to overcome comprehension difficulties.

**Keywords:** Reading Functions. Reading Comprehension. Accountant Skills.

Article presented at the 20th Brazilian Congress of Accounting, September 11 to 14, 2016, Fortaleza/CE.

**Submission on** 02/21/2019. **Review on** 04/02/2019. **Accepted on** 05/09/2019. **Published on** 06/24/2019.

## 1 INTRODUCTION

Reading is the main means of learning and practical application that the accounting professional has since the activity is regulated by a large number of laws and regulations. In this way, in order for the accountant to perform the functions to which they are correctly committed, compliance with these regulations is required. This fact has intensified in the last decade, since Brazil has undergone a major reform in its accounting system as it was inserted in the international context of adopting international accounting standards. Such changes have been implemented in 2005 with the creation of the Brazilian Committee of Accounting Pronouncements (CPC in the Brazilian Portuguese abbreviation).

The expressive volume and the constant changes of norms to be followed show the need for reading that professional accountants need to exercise their craft in order to keep up to date in the labor market. Therefore, it is essential that this practice be encouraged and developed in future professionals, even in the graduation phase. Students of accounting courses should leave the university as good readers, having the habit of reading solidified.

Reading is imperative in universities in a significant way. Relevance of this practice in undergraduate courses and diagnosis of university students' reading levels as well as their predominant functions have been an object of studies by Oliveira (1996), Witter (1997) and Pires (2012), among others. Results from such studies demonstrate the importance and influence of reading in students' professional formation, being essential for teaching-learning in university environments and contributing to forming qualified professionals according to their craft specificities.

From this perspective, diagnosis of students' reading ability and its reflection on the performance of competences for their development as professionals is considered essential. Thus, according to Silva (1992), in reading, readers become aware that their goal is in understanding and criticism and not mere memorization. When text meaning is verified, critical readers unveil authors' messages and react to them critically, questioning, positioning themselves in view of the ideas conveyed and initiating comparisons. After decoding and reflecting, one proceeds to transformation, in which readers act on the knowledge content, recreating it. At the end of the process, critical reading results in developing a new text attributed to the reader.

According to Cardoso (2006), accountants' skills are interlinked with the knowledge that the professional of the area must present. In this line, one can see the importance of reading comprehension insofar as concepts and norms must be met in their essence to be correctly put into practice.

Due to the reality required for accounting professionals and considering the influence of reading in the course of vocational training, this text expresses the following research question: What is the contribution of the reading habit of Accounting Sciences course students from a higher education institution for the development of professional accountants' skills?

This research differs from others in the area of reading because it analyzes the topic by relating it to specific skills that accounting professionals must obtain, seeking to link the Functions of Reading and comprehension with the formation of such skills.

Supported by the analysis of Functions of Reading, learning, usefulness, morality and stimulation proposed by Greaney and Neuman (1990), the ten competences described in the *Dicionário de Competências do Contador* (Accountants' Dictionary of Competences) have been established, as evidenced by Cardoso (2006). As reflected upon by Greaney and Neuman (1990), these functions, through the practice of reading, add characteristics that allow to develop knowledge (learning), stimulate the imagination (stimulus) and the ethical and moral formation (morality), in addition to improving students' oral and written language (usefulness). This may lead to formation of skills (Cardoso, 2006) and abilities that allow the adequate knowledge to enter the labor market.

Thus, the study has been developed with the goal of identifying the contribution of students' reading habits to their professional training based on application of the cloze test and the Functions of Reading Scale proposed by Greany and Neuman (1990).

To answer the research question and achieve the general goal, the study shall be developed: (i) to identify skills and knowledge to be developed in accounting sciences courses from reading to professional development, (ii) to identify accounting sciences students' reading profile at a higher education institution and (iii) to present a diagnosis about accounting sciences students' reading habits at a higher education institution, relating it to their training as accountants.

## **2 THEORETICAL FRAMEWORK**

### **2.1 Reading, its functions and understanding**

By living in society, human beings feel the need to express themselves and this stimulus has led them to develop four basic skills: speaking, listening, reading, and writing. Thus, language is used as a form of communication in a system of representations and possibilities (Chaguri, Barbosa, Arouca & Wuo, 1997).

Development of human communication by means of writing has turned reading into one of the principal means by which people acquire knowledge about the world, knowing the peoples, their achievements and discoveries and people's thoughts and feelings, among others. Thus, reading is of critical importance in this process (Centofanti, Ferreira & Tedesco, 1997).

The act of reading, however, cannot be seen merely as a simple decoding of signs. As taught by Freire (2017, p. 11), "Reading the world precedes reading words. Hence later reading of the latter cannot ignore the continuity of reading the first." For the author, reading implies, since then, the perception of relations between text and context and there is no meaning in reading without it being inserted into a society.

Reading is evidenced in the various levels of education, beginning in the period of literacy, by learning written word meanings and continuing with literary and bibliographic contacts throughout academic life (Silva, 2011). In dealing with relations between reading and university, Witter (1997) has emphasized the idea that each element has its complexity in isolation. Thus, the relationship between the two variables could not be less complex. In the author's understanding, reading is a critical element for the teaching-learning process in university environments.

It is expected that, in order to enter universities, students have already acquired the ability to read and understand texts, since this is required during the courses to exercise creativity, independence, ability to seek options, formulate hypotheses and understand reading in a critical way (Tourinho, 2011).

Studies show, however, that higher education students express difficulties in text comprehension, a fact that suggests that this ability has not been adequately acquired in their previous education. This deficiency can lead students to complete university courses without having an adequate technical knowledge to enter the labor market. These papers advocate for programs to remedy reading deficiencies for university students (Freitag, Sarmento, Costa & Santos, 2014; Oliveira & Oliveira, 2007; Santos, Suehiro & Oliveira, 2004; Witter, 1997).

When faced with scientific analysis complexity in teaching-learning problems by means of reading, it is necessary to pay special attention to university students' reading habits as well as the difficulties they face in understanding texts (Pinto, Alvarenga & Kock, 1997).

Parallel to papers on understanding, there are studies on motives for reading. Greaney and Neuman (1990), by means of a transcultural perspective, have defined ten Functions of Reading: learning, leisure, escapism, stimulus, spending time, specific social targets, morality, self-respect, flexibility, and usefulness. From their research, the Functions of Reading Scale has been created,

a questionnaire consisting of 50 statements, five for each function, from which it is possible to identify predominant functions in respondents' reading habits.

By identifying and studying these functions at a university, students are better understood as readers, providing opportunities to remedy and develop reading practices resulting in their improved academic performance by means of improved teaching and learning (Centofanti *et al.*, 1997).

Among the functions indicated by Greaney and Neuman (1990), learning, stimulus, morality and usefulness have been used in the research, considered in this study as directly related to accountants' professional skills development as shown in the following topic. Learning values knowledge acquisition and development; stimulus improves imagination and fantasy; morality provides ethical and moral training; usefulness gives value to oral and written language improvement (Greaney & Neuman, 1990).

## 2.2 Professional skills, accountants' skills and reading

The term competence comes from Latin and from the word *competentia*, which means "the quality of one who is able to appreciate and solve a certain subject, doing something in a capable way with skill, aptitude, and suitability" (Cardoso & Riccio, 2010, p. 355). The word is used in common sense with the meaning of qualification to perform a given task and its antonym carries a pejorative sense in the context of work environments (Fleury & Fleury, 2001).

In scientific environments, discussions about competences have begun in the United States by McClelland (1973) and proceeded among psychologists and administrators (Fleury & Fleury, 2001). The author critically addresses intelligence tests used at the time to select applicants for job and study positions at universities and suggests some change in the selection criteria so that applicants' competences shall be taken into account (McClelland, 1973).

Several scholars have addressed the topic but a consensus has not yet been reached on its concept and the problem cannot be solved, as it is a construct in progress (Cardoso & Riccio, 2010).

Regarding this, Ramirez (2003) clarifies that there is no way to separate the pieces of knowledge (knowing how to be, knowing how to do and knowing how to act) nor the intellect of our wills and physical and motor capacities since human beings are integrated. In this way, the author considers competence as the junction of the triad knowledge, skills, and attitudes.

By knowledge, what is meant is "the set of facts, information, principles, and concepts that are important to solve points, issues, and problems related to work" (Cardoso, 2006, p. 96). Skill is "the ability to know how to do something by means of orderly and purposeful actions aimed at achieving goals" (Ramirez, 2003, p. 21). As for the attitudes, they are seen as personal initiatives (Cardoso, Souza & Almeida, 2006). Joining the three concepts results in competence.

Competences mentioned by scholars in approaching the topic, linked to their concepts, were compiled and transformed into the Dictionary of Accountants' competences (*Dicionário de Competências do Contador*) by Cardoso (2006), based on the dictionary model of professional competences proposed by Spencer and Spencer (1993).

The *Dicionário* consists of 18 competences classified in skills, abilities, knowledge, and other characteristics. In capacities are analytical and communication competences such as skills, strategies, IT, negotiation, effectively listening, attendance and external relationship; knowledge is distributed into tools of control, legal, accounting and finance, planning, management techniques and information management; and self-control, entrepreneurship, integrity and trust and teamwork have been grouped into other characteristics (Cardoso, 2006).

Below is the list of skills described in the *Dicionário de Competências do Contador* according to Cardoso (2006) and according to Table 1.

Table 1  
**Accountants' competences**

<b>Accrual-basis</b>	<b>Concept</b>
Analytics	They know how to analyze the parts of problems or situations, establishing their relationships to formulate various solutions and the value of each. Moramed and Lashine (2003) and AICPA (1999)
Communication	They establish harmony in communications with people or groups, understanding messages and being understood. They demonstrate good utterance when communicating ideas in writing and verbally. Boyatzis, Stubbs and Taylor (2002), IFAC (2003) and Abdolmohammadi, Searson and Shanteau (2004)
Effectively listening	They develop interactive dialogues with people, asking for more details about subjects, evaluating messages and providing feedback. Morgan (1997) and AAA – Francis, Mulder and Stark (1995)
Integrity and trust	They have integrity and positively express their personal values and beliefs in a manner that is consistent with their company's ethical standards. They inspire confidence in the fulfillment of commitments taken on. Bower (1957)
Planning	They study and apply concepts of strategic, operational, and financial planning and follow-up, helping senior management to achieve its objectives. Hardern (1995) and Needles, Cascini, Krylova and Moustafa (2001)
Entrepreneur	They develop creative solutions to companies' and clients' problems; they seek to innovate in view of companies' restrictions. They take on calculated risks. Spencer and Spencer (1993), Handern (1995) and Laurie (1995)
Control tools	They know and use control and management tools such as budget, internal control, costs, and cash flow, among others. Henning and Moseley (1970) and Siegel and Sorensen (1999)
Legal	They know and follow mandatory tasks such as tax planning and meeting tax requirements. Kester (1928) and Henning and Moseley (1970)
Accounting and finance	They master and interpret concepts related to the accounting and business finance fields, taking into account internal and external users' interests for this information and the norms in force in the national and international environments. Bower (1975) and Henning and Moseley (1970)
Management techniques	They demonstrate being updated with techniques, data, and new knowledge by means of reading, courses, travels, congresses etc. Laurie (1995) and Siegel and Sorensen (1999)

Source: Cardoso (2006).

As described in Table 1, among accountants' competences gathered by Cardoso (2006) it is possible to identify those linked to knowledge that this professional should possess: planning, control tools, accounting, and finance, legal and management techniques. The "planning" skill requires that accountants study and apply concepts related to that area. "Control tools" demand their knowledge and use. "Legal" competence requires knowledge and monitoring of tax obligations as well as constant updating of legislation that permeates the profession. "Accounting and Finance" require mastery and interpretation of concepts related to the area, seeking to meet national and international standards. As for "management techniques", they require updating in terms of techniques, data and new knowledge – the author mentions reading as a means of reaching this requirement (Cardoso, 2006).

Among the skills required for accountants, there are also "communication" and "effectively listening". According to Table 1, the first is defined as the ability to understand messages and be understood and to be understood in writing and verbally. The second is defined as the ability to evaluate messages and develop interactive dialogues (Cardoso, 2006). In the "analytical" competence, the ability to know how to analyze parts of a problem or situation is required. "Integrity and trust", in turn, present the fact that professionals should express values and beliefs

in line with companies' ethical standards while "entrepreneurial" competences require the development of creative solutions and innovation in view of constraints.

Table 2 shows the association of the proposed Functions of Reading proposed by Greaney and Neuman (1990) with the competences described in the *Dicionário de Competências do Contador* evidenced by Cardoso (2006).

Table 2

**Relationship between Functions of Reading and accountants' skills**

Functions of Reading	Competence
Learning – it value acquisition and development of knowledge by readers (Greaney & Neuman, 1990). Pires (2012) argues that reading at the university is indispensable for the development of qualified professionals by being associated with obtaining knowledge. The author also considers that developing this habit is essential for students as future professionals as they need to follow up the knowledge constantly produced related to their area of professional performance.	Planning, control tools, accounting and finance, legal, management techniques
Usefulness – through it readers shows interest in improving oral and written language (Greaney & Neuman, 1990). It is necessary that the students know how to express their feelings, thoughts and ideas so that they can have professional success and that formation must be universities' goal (Centofanti <i>et al.</i> , 1997). The authors also consider that the ability to express oneself can be acquired through the practice of reading and writing throughout the academic life.	Communication, effectively listening
Morality – is the function whose practice values moral and ethical formation (Greaney & Neuman, 1990). Through reading, university students acquire patterns of behavior and incorporate values that shall be useful, providing security in decision making, arguments, and positions in their personal and professional lives (Pinto <i>et al.</i> , 1997). Technical-scientific reading is necessary for work performance but students, as citizens, need to devote themselves to readings from other areas of knowledge for personal enrichment and universities cannot neglect this fact (Witter, 1997).	Integrity and trust
Encouragement – provides imagination and fantasy (Greaney & Neuman, 1990). According to Arrigucci (1994), "The experience of reading has, in fact, this energy of lighting up the imagination, awakening its transforming capacity, its firepower to join in new units what is simply given: openness to what could be." During readings, enquirers relate the fantasy that is in the books universe with the reality of their social environment, which leads to an overlap of creativity, imagination and reasoning on a stage of possibilities (Brito, 2010). When mentioning creativity, Valentim (2008, p. 4) describes it as "a cognitive process, individual or collective, that generates original ideas and perspectives for a particular issue, problematic or not." For the author, implementation of creative ideas results in innovation.	Analytical, entrepreneur

Source: Prepared by the authors (2018).

It is inferred from Table 2 that, because of verbs such as studying, knowing and mastering and also directly referring to concepts and norms in their definition, the skills "planning," "control tools," "accounting and finance," "legal" and "management techniques" have an affinity with the Functions of Reading related to the learning function. Valuation of reading with the function of acquiring knowledge makes it propitious to develop the aforementioned competences.

In addition, when reading with the usefulness function, interested in improving oral and written language, students enable the development of skills that require such improvement as well as improving the way they effectively express themselves. Table 2 shows that accountants must act with ethics when exercising the profession, a competence whose development is favored by reading directed to morality insofar as ethical formation is valued by student readers and they understand their moral obligations in the professional field. Moreover, in reading as a stimulus function, reading students make it propitious to acquire competences related to creativity, signaling a correlation of this function with the "analytical" and "entrepreneurial" competences.

In general, in order for the reading habit to reach the function it proposes, it is necessary that the text read be understood in its entirety. Reading for the purpose of learning shall be useless

if the reader does not fully understand the message conveyed by the author through the text. The same goes for the other Functions of Reading. “Forming critical readers with argumentative skills and problem-solving skills should be one of most educators’ goals. Just reading is not enough, one has to take a stand on what is read.” (Centofanti *et al.*, 1997, p. 37).

Therefore, with regard to future professional accountants’ skills related to knowledge, the importance of reading comprehension is understood insofar as concepts and norms must be understood in their essence to be correctly put into practice. It should be noted that failure to comply with legal norms or their misapplication might result in loss to companies, both financially as a result of tax penalties and in terms of financial statements reliability caused by distortions, which may have an erroneous impact on users’ information for decision-making.

### 3 METHODOLOGY

Considering the objective it proposes, the research has been classified as exploratory and descriptive. Beuren and Raupp (2012) express the idea that an exploratory study contributes to clarify issues superficially approached, deepening aspects not yet provided on a given subject. Gil (2010) teaches that exploratory research provides greater knowledge about problems with the purpose of making them more explicit or formulating hypotheses about them. With regard to descriptive research, Gil (2012) teaches that the main objective is to describe characteristics of a given population.

Regarding the problem approach, the research is classified as quantitative. Richardson (2012) emphasizes that quantitative research is characterized by the use of quantification, both in the information collection modalities and in the handling of these by means of statistical techniques, from the simplest to the most complex, such as means tests, regression analysis etc. Thus, for this study, descriptive statistics and averages test have been used (Kruskal–Wallis test).

As for the procedures, bibliographic research and *survey* are used. Martins and Theóphilo (2009) argue that the former is necessary in all scientific research and, according to Beuren and Raupp (2012), it is by this that one becomes aware of the scientific production provided on the subject, opening room for a new reading when gathering several isolated publications. Regarding *survey*, Gil (2012) emphasizes that its characteristic is the direct interrogation of the group whose behavior one desires to know and that it is appropriate for descriptive studies.

Data were collected using the medium-sized questionnaire technique, which consisted of two dimensions and was applied to students from a higher education institution located in the Brazilian municipality of Fortaleza, CE. The first dimension is based on the Functions of Reading Scale developed by Greaney and Neuman (1990) and brought up and adapted by Witter (1996). From the scale ten functions, the following were used in the research: learning, stimulus, morality, and usefulness. Thus, from the 50 items in the questionnaire, only 20 were used, and the scale items were renumbered. In each function, five statements were drawn, considering the following possibilities and scoring: very (3), more or less (2), little (1) or nothing (0). In this way, each function can reach up to 15 points and the complete questionnaire can reach a maximum of 60 points per student.

The second dimension of the instrument is a text that aims to analyze students’ reading comprehension, produced according to the cloze technique created by Taylor (1953). The cloze test aims to evaluate reading comprehension and is also used to evaluate written materials readability. The test consists of completing a text in which words were concealed in a methodical way, omitting the fifth word several times. Gaps in size proportional to the omitted terms are left and the text first and last sentences are preserved in their entirety. In this way, the hidden words are revealed by the respondent from the reading and understanding of the context. Thus, a text of approximately 250 words has been used, from which every fifth word was omitted, replacing them with a stroke proportional in size to that of the word omitted.

The chosen text was used in the Examination of Sufficiency, edition 2014.2 and is about an excerpt from the chronicle “Pequenos choques: a Bandejinha” (Small culture shocks: the little tray), by Brazilian writer João Ubaldo Ribeiro (2011). The choice for a literary text instead of a technical one from the accounting area was due to what was explained by Centofanti *et al.* (1997), who advised to diversify the reading material, arousing students’ interest in reading. It was also because the study does not consider any distinction between school semesters since it is assumed that students from more advanced semesters are more familiar with the accounting area technical terms in relation to those from the earliest school semesters (Beck & Rausch, 2015). On the other hand, according to Alves (2005), the act of reading depends on prior knowledge and the establishment of intertextual links that allow meaningful reading, which therefore contributes to accumulation of information used for efficient professional practice (Masetto, 2003).

Correction used was the literal one, which considered as correct the exact completion of the word omitted. One point was assigned for hits and 0 for errors, so the score could range from 0 to 46 points. Then, an analysis was carried out by means of the Kruskal-Wallis test of mean differences with the aim of verifying differences among several independent groups, admitting the non-normality of the comparison variable among the confronted groups. Thus, we tried to verify if there were significant differences in the students’ comprehension, measured by the cloze test in relation to the annual periods in which they were.

The procedure allows us to observe the interactions of the readers’ mind with the written text, which are established in the number of times text words have been systematically omitted. Gaps in the text become spaces of direct observation of comprehension that relate the experiences of the world and language stored in the readers’ memory with the semantic and syntactic answers obtained in the context to make up the meaning. The technique is frequently applied by the scientific community because it is easy to apply and has tested and proven efficacy when evaluating the reading comprehension of the people researched. Their results showed positive correlations between understanding and academic performance as well as written production among university students (Cunha & Santos, 2006; Santos, Primi, Taxa & Vendramini, 2002; Santos, Suehiro & Oliveira, 2004).

For grouping the responses of the cloze test, three criteria, established by Bormuth (1968), have been adopted. The first refers to the level of frustration and concerns the fact that the reader has not adequately abstracted the information read (scores up to 44% correct). The second criterion is the instructional one: comprehending only sufficiently for understanding (from 44.1% to 57% of correct answers). Finally, the independent level indicates a creative, autonomous and fluent understanding of the text (greater than 57% of correct answers). By identifying at what reading level the accounting students from a higher education institution are classified through textual comprehension, the intention is to investigate if their reading habits favor the use of the ability as an instrument to develop professional skills as accountants.

### 3.1 Sample definition

The accounting sciences course at the higher education institution had 822 students in the day and night school periods. The sample consisted of 180 students from all semesters of this undergraduate program and was collected by accessibility (Gil, 2012). The choice of the sample was made by the availability of classes for application of the questionnaire, together with the professors of the course.

## 4 RESULTS

For the purpose of analyzing the relationship between students’ reading habits and the course period, nine school semesters were considered, structured in five annual periods. It was not

possible, however, to identify to which school year ten respondents from the sample belonged and their results were classified in the “miscellaneous” group.

Results were divided into two topics containing the two dimensions of the applied instrument, as follows.

#### 4.1 Functions of Reading results

In order to classify the level of use of the Functions of Reading, the average score was parameterized as in Table 3:

Table 3

##### Functions of Reading score

Level	Average usage score of the function
High	From 11 to 15 points
Medium	From 6 to 10 points
Low	Below 5 points

Source: Oliveira (1996).

The functions “learning,” “usefulness,” “morality” and “stimulus,” according to the scale by Greaney and Neuman (1990), assessed by the students, are described by mean of use, standard deviation and variance in Table 4.

Table 4

##### Using the Functions of Reading

Functions	Criteria	1st year	2nd Year	3rd Year	4th year	5th year	Miscellaneous	General
Learning	Average	11.800	10.725	10.902	11.186	10.462	11.200	10.983
	Standard deviation	1.642	2.996	2.663	2.270	2.370	2.700	2.516
	Variance	2.695	8.974	7.090	5.155	5.618	7.289	6.329
Usefulness	Average	12.350	11.375	12.146	12.047	12.038	12.000	11.950
	Standard deviation	2.300	2.579	2.080	2.370	2.306	3.464	2.397
	Variance	5.292	6.651	4.328	5.617	5.318	12.000	5.746
Morality	Average	8.350	7.500	8.098	7.767	8.154	8.800	7.961
	Standard deviation	3.249	3.359	3.368	3.702	3.495	3.824	3.449
	Variance	10.555	11.282	11.340	13.707	12.215	14.622	11.892
Stimulus	Average	9.650	7.950	8.561	8.837	8.038	8.400	8.528
	Standard deviation	2.907	3.909	3.782	3.741	4.015	4.477	3.774
	Variance	8.450	15.279	14.302	13.997	16.118	20.044	14.239

Source: Research data (2018).

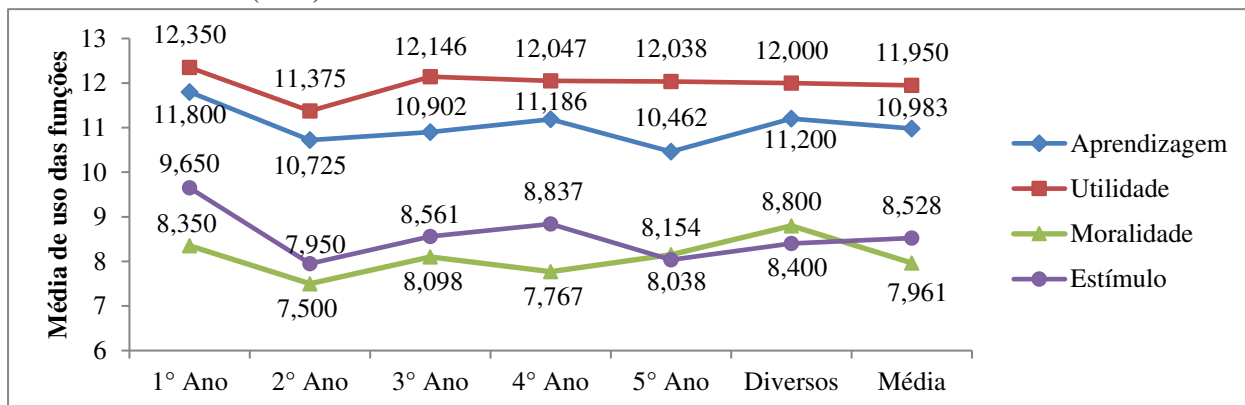
The indicated average places the accounting sciences course students at the high level of use of the Functions of Reading only in the functions of learning and usefulness. In relation to the morality and stimulus functions, they are situated at the average level of use.

The values for variance and standard deviation of the “morality” and “stimulus” functions demonstrate how individual students’ scores are scattered relatively to the mean. The data is reinforced by the calculation of the coefficient of variation (CV), the result of which was 44.25% and 43.317% for the “stimulus” and “morality” functions, respectively. Results above 30% are considered as high dispersion (Correia, 2003). Thus, students’ reading behavior in relation to these functions was shown to be irregular, with students making high use of the functions, while others

rarely used them. Figure 1 demonstrates the use of Functions of Reading by course year and average usage.

**Figure 1.** Average use of Functions of Reading

Source: Research data (2018).



The results corroborate previous studies, in which the functions most used by university students were “learning” and “usefulness.” As for stimulus and morality, the results of previous studies also revealed average level of use of these functions (Oliveira, 1996; Centofanti *et al.*, 1997). According to these authors’ conclusions, it is possible that the result be attributed to the walk of life in which these students are found, which leads them to direct their reading to the learning aspect, indispensable in academic life. Witter (1997), however, warns that diversified readings should be undertaken to cover other aspects of good professionals’ training.

As for the development of accountants’ professional skills, results on students’ reading habits demonstrate that competences related to functions “usefulness” and “learning” have a favorable environment for them to be developed as students turn to area-specific readings. Thus, students’ reading habits consist of a positive contribution to the development of the following competences: planning, control tools, accounting and finance, legal, management techniques, communication and effectively listening (Cardoso, 2006). However, if Functions of Reading linked to academic usefulness are to be cultivated, others cannot be overlooked, at the risk of hindering professional accountants’ skills development related to ethical and moral training and creativity. The analyzed students risk not acquiring the skills “integrity and trust,” “entrepreneurship” and “analytical” listed by Cardoso (2006) because they present an average use of the functions “stimulus” and “morality.”

#### 4.2 Results from the cloze test

Students’ understanding was measured by the cloze test. The results are set out in percentages in Table 5.

**Table 5**  
**Percent success in the cloze test**

Percentage of hits	1st year	2nd Year	3rd Year	4th Year	5th Year	Miscellaneous	General	Kruskal-Wallis
Medium	51.957%	47.880%	45.334%	45.147%	51.923%	47.391%	47.657%	4.922 (Significance 0.425)
Minimum	21.739%	15.217%	21.739%	4.348%	10.870%	21.739%	4.348%	

Contribution of the reading habit of Accounting Science students in the development of professional skills

	73.913						
Maximum	%	76.087%	73.913%	84.783%	80.435%	60.870%	84.783%
Standard deviation		14.944					
	%	15.910%	13.103%	17.615%	14.332%	11.217%	15.249%
Variance		2.233%	2.531%	1.717%	3.103%	2.054%	1.258%
							2.325%

Source: Research data (2018).

As observed in Table 5, the overall hit ratio was 47.657%. The best performance in the cloze test was for the first school year, with an average hit of 51.957%, followed by the fifth school year (51.923%). The worst performance was observed in the fourth school year, with an average hit of 45.147%, followed by the third school year (45.334%). The best and worst individual performances were observed in subjects from the fourth school year, with a percentage of correctness of 84.783% and 4.388%. Table 3 also shows that the Kruskal-Wallis test (4.922, with significance of 0.425) was not statistically significant, that is, the probability of differences among the groups (years of study) to be related to chance is above the level of 10%. Therefore, there are no significant differences among the groups, indicating that for this data set the years studied do not cause an increase in the average of the points related to reading comprehension measured by the cloze test. Figure 2 demonstrates the average student achievement.

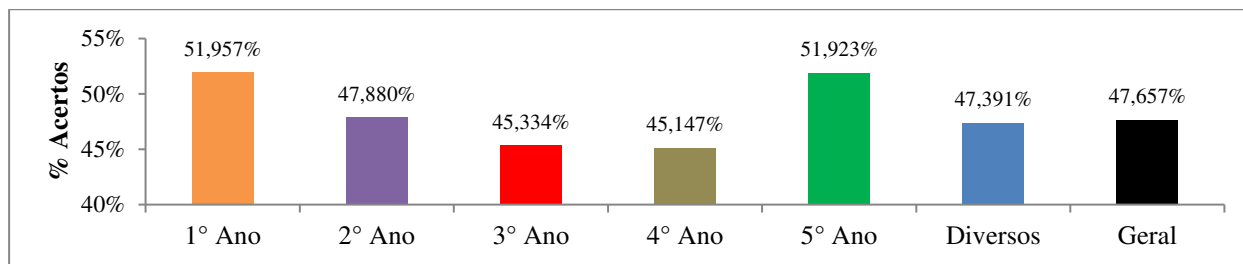


Figure 2. Average hit on the cloze test

Source: Research data (2018).

In qualitative terms, students were distributed in reading levels according to results in the cloze test, following the model by Bormuth (1968). Table 6 shows the students distribution by percentage of success in the three reading levels parameterized by the author.

Table 6  
Students' level of reading

Levels	1st year	2nd year	3rd year	4th year	5th year	Miscellaneous	Total	%
Frustration (up to 44%)	5	15	20	21	5	3	69	38%
Instructional (44.1% to 57%)	6	12	15	13	11	6	63	35%
Independent (above 57%)	9	13	6	9	10	1	48	27%
Total	20	40	41	43	26	10	180	100%

Source: Research data (2018).

Most respondents are at the level of frustration (38%), that is, they have severe difficulties in understanding reading and cannot satisfactorily abstract the information they read. The number of students at the instructional level, however, is approximate (35%), signaling that they can sufficiently understand the subject. However, they do not express creative, flexible, autonomous and fluent behavior. As for the independent level of reading, there are 27% of the students with a good textual understanding. Other surveys in the area have obtained similar results in the cloze test with university students, demonstrating a low level of reading comprehension, which is reflected in the students' academic performance (Centofanti *et al.*, 1997; Freitag *et al.*, 2014;

Oliveira & Oliveira, 2007; Santos *et al.*, 2004). Relating the results obtained to the development of accountants' professional skills, it is noticed that the students' low understanding impairs efficient and effective reading practices. Thus, the environment generated by university students' reading habits to acquire skills is impaired. These data are alarming, since they are university students who shall soon enter the labor market and if there are no intervention programs to adjust the situation they shall presumably be left with insufficient technical qualifications for the challenges inherent in the profession.

## 5 CONCLUSIONS

The data in the figures and tables show that the Functions of Reading "learning" and "usefulness" are widely used by students but their use can be extended to reach the maximum degree. With this result, it can be stated that students have great chances to develop accountants' skills related to knowledge acquisition and language improvement at the end of university courses when they complete their professional training and if they enter the labor market, to the extent in which reading with this function consists of an environment favorable to development of these abilities. Thus, the importance of cultivating and encouraging the habit of reading related to learning and usefulness for university students is well known.

In turn, functions "stimulus" and "morality" have demonstrated an average level of utilization. Therefore, competences related to ethics and creativity have not found a completely favorable environment for them to be acquired through students' reading habits. Importance of reading texts other than technical ones related to the area of activity has been highlighted by authors such as Centofanti *et al.* (1997), who have advised to diversify the reading material, arousing students' interest in reading.

Regarding text comprehension obtained in the cloze test, results show that most readers are at levels of frustration and dependence because they have little reading understanding, which makes them inefficient and ineffective for the purposes intended by reading students. Thus, this problem reflects negatively for the development of competences through reading, since this must be carried out in full understanding of the texts read so that their content is satisfactorily absorbed.

Students' performance has not been shown to be influenced by the university. An evolution in the reading level was expected, attributed to the maturity achieved during the course, but this was not the case. Freshmen performed better than the juniors did.

The study achieved the objectives that were set but it is important to consider the limitations of this research, especially with regard to having been restricted to a single institution. It is suggested that this study be extended to other educational institutions so that a comparison can be made for the reading level of students from public and private institutions. Another limitation of the research is that respondents were not followed up during the course to test their evolution in reading. One suggestion is the application to the same students in their different years of formation, allowing to infer the university's contribution to improving reading habits through the follow up of this evolution.

An investigation about actions that universities take to develop the use of the Functions of Reading and improvement of text comprehension with students is also suggested with a view to identifying which mechanism can be used to solve the problems mentioned. As a practical contribution, improving reading practices in the academic environment is recommended so that future professionals have the skills required by the job market and, consequently, obtain the desired professional success at the end of the course.

## REFERENCES

- Abdolmohammadi, M. J., Searfoss, D. G., & Shanteau, J. (2004). An investigation of the attributes of top industry audit specialists. *Behavioral Research in Accounting*, 16(1), 1-17.
- Alves, S. V. (2005). *Trabalhando as inteligências múltiplas em sala de aula*. Brasília: Plano.
- American Institute of Certified Public Accountants. Core competency framework for entry into the accounting professions. New York: American Institute of Certified Public Accountants, 1999.
- Arrigucci, D., Jr. (1994). Leitura: entre o fascínio e o pensamento. *Série Idéias*, (13), 19-24.
- Beck, F., & Rausch, R. B. (2015). Fatores que influenciam o processo ensino-aprendizagem na percepção de discentes do curso de ciências contábeis. *Contabilidade Vista & Revista*, 25(2), 38-58.
- Bormuth, J. R. (1968). Cloze test readability: Criterion reference scores. *Journal of educational measurement*, 5(3), 189-196.
- Bower, J. B. (1957). A Profession of Accounting-or of Accountancy? *The Accounting Review*, 32(2), 194.
- Boyatzis, R. E., Stubbs, E. C., & Taylor, S. N. (2002). Learning cognitive and emotional intelligence competencies through graduate management education. *Academy of Management Learning & Education*, 1(2), 150-162.
- Brito, D. S. (2010). A importância da leitura na formação social do indivíduo. *Periódico de Divulgação Científica da FALS*, 4(8), 1-35.
- Cardoso, J. L., de Souza, M. A., & Almeida, L. B. (2006). The accountant's profile in the present: an exploratory study. *BASE: Revista de Administração e Contabilidade da Unisinos*, 3(3), 275-284.
- Cardoso, R. L. (2006). *Competências do contador: um estudo empírico*. Tese de Doutorado, Faculdade de Economia, Administração e Contabilidade, Universidade de São Paulo, São Paulo, SP, Brasil. Recuperado de <http://www.teses.usp.br/teses/disponiveis/12/12136/tde-03042007-100732/>
- Cardoso, R. L., & Riccio, E. L. (2010). Existem competências a serem priorizadas no desenvolvimento do contador? Um estudo sobre os contadores brasileiros. *REGGE Revista de Gestão*, 17(3), 353-367.
- Centofanti, E. M., Ferreira, S. M., & Del Tedesco, T. (1997). Compreensão da leitura por universitários de psicologia. In G. P. Witter (Org.). *Leitura e universidade* (pp. 33-60). Campinas: Alínea.
- Chaguri, A., Barbosa, B. A., Arouca, E. A., & Wuo, M. (1997). Compreensão de leitura: estudo comparativo entre universitários. *Psicologia leitura & universidade*, 61-76.

- Conselho Federal de Contabilidade (1996). *Resolução CFC nº. 803, de 10 de outubro de 1996*. Aprova o Código de Ética Profissional do Contador – CEPC. Brasília: Autor. Recuperado de: [http://www2.cfc.org.br/sisweb/sre/detalhes\\_sre.aspx?Codigo=1996/000803](http://www2.cfc.org.br/sisweb/sre/detalhes_sre.aspx?Codigo=1996/000803)
- Correia, M. S. B. B. (2003). *Probabilidade e estatística* (2a ed.). Belo Horizonte: PUC Minas Virtual.
- Cunha, N. B., & Santos, A. A. A. dos (2006). Relação entre a compreensão da leitura e a produção escrita em universitários. *Psicologia: Reflexão e Crítica*, 19(2), 237-245.
- Fleury, M. T. L., & Fleury, A. (2001). Construindo o conceito de competência. *Revista de Administração Contemporânea*, 5(Edição Especial), 183-196.
- Francis, M. C., Mulder, T. C., & Stark, J. S. (1995). Intentional learning: a process for learning to learn in the accounting curriculum. Sarasota, FL: Accounting Education, Change Commission and American Accounting Association, 1995. *Accounting Education Series*, 12.
- Freire, P. (2017). *A importância do ato de ler em três artigos que se completam*. São Paulo: Cortez.
- Freitag, R. M. K., Sarmiento, V. H. V., Costa, C. C., & Santos, K. L. (2015). Teste cloze e a competência em leitura de universitários: uma experiência no curso química/licenciatura da UFS/Itabaiana. *InterSciencePlace*, 1(30), 1-13.
- Gil, A. C. (2010). *Como elaborar projetos de pesquisa* (5a ed.). São Paulo: Atlas.
- Gil, A. C. (2012). *Métodos e técnicas de pesquisa social* (6a ed.) São Paulo: Atlas.
- Greaney, V., & Neuman, S. B. (1990). The functions of reading: a cross-cultural perspective. *Reading Research Quarterly*, 25(3), 172-195.
- Hardern, G. (1995). The development of standards of competence in accounting. *Accounting Education*, 4(1), 17-27.
- Henning, D. A., & Moseley, R. L. (1970). Authority role of a functional manager: the controller. *Administrative science quarterly*, 482-489.
- Henry, L. J. (1995). Persistence leads to accounting performance: How to spot a persistent potential employee. *Arkansas Business and Economic Review*, 28(3), 1-6.
- International Federation of Accountants' Education Committee. *Towards competent professional accountants*. New York: IFAC, 2003.
- Kester, R (1928). The importance of the controller. *The Accounting Review*, 3(3), 237-251.
- Martins, G. D. A., & Theóphilo, C. R. (2009). *Metodologia da pesquisa científica para ciências sociais aplicadas*. São Paulo: Atlas.
- Masetto, M. T. (2003). *Competência pedagógica do professor universitário* (Cap. 2, pp. 19-33). São Paulo: Summus.

- McClelland, D. C. (1973). Testing for competence rather than for “intelligence”. *American psychologist*, 28(1), 1-14.
- Mohamed, E. K., & Lashine, S. H. (2003). Accounting knowledge and skills and the challenges of a global business environment. *Managerial finance*, 29(7), 3-16.
- Morgan, G. J. (1997). Communication skills required by accounting graduates: practitioner and academic perceptions. *Accounting Education*, 6(2), 93-107.
- Needles, B. E., Jr, Cascini, K., Krylova, T., & Moustafa, M. (2001). Strategy for Implementation of IFAC International Education Guideline No. 9: “Prequalification Education, Tests of Professional Competence and Practical Experience of Professional Accountants”: A Task Force Report of the International Association for Accounting Education and Research (IAAER). *Journal of International Financial Management & Accounting*, 12(3), 317-353.
- Oliveira, M. H. M. A. D. (1996). Funções da leitura para estudantes de graduação. *Psicologia Escolar e Educacional*, 1(1), 61-68.
- Oliveira, R. Á. M. D., & Oliveira, K. L. D. (2007). Leitura e condições de estudo em universitários ingressantes. *Psic: revista da Vetor Editora*, 8(1), 51-59.
- Pinto, C. J. A., Alvarenga, M. A. P., & Kock, R. A. A. (1997). Hábito de leitura e compreensão de texto entre universitários. In G. P. Witter (Org.). *Psicologia: leitura e universidade* (pp. 33-60). Campinas: Alínea.
- Pires, E. D. N. (2012). A importância do hábito da leitura na universidade. *Revista ABC: Biblioteconomia em Santa Catarina*, 17(2), 365-381.
- Ramirez, P. (2003). *Uma estratégia para melhoria da formação de competências para o profissional de nível técnico na área de gestão*. Dissertação de Mestrado, Centro Universitário Nove de Julho, São Paulo, SP, Brasil.
- Raupp, F. M., & Beuren, I. M. (2006). Metodologia da Pesquisa Aplicável às Ciências. In I. M. Beuren (Org.). *Como elaborar trabalhos monográficos em contabilidade: teoria e prática* (Cap. 3, pp. 76-97). São Paulo: Atlas.
- Ribeiro, J. U. (2011). *Um brasileiro em Berlim*. Rio de Janeiro: Nova Fronteira.
- Richardson, R. J. (2012). *Pesquisa social: métodos e técnicas* (3a ed.). São Paulo: Atlas.
- Santos, A. A. A., Primi, R., de O. S., Taxa, F., & Vendramini, C. M. (2002). O teste de Cloze na avaliação da compreensão em leitura. *Psicologia: reflexão e crítica*, 15(3), 549-560.
- Santos, A. A., Suehiro, A. C., & Oliveira, K. L. D. (2004). Habilidades em compreensão da leitura: um estudo com alunos de psicologia. *Estudos de Psicologia*, 21(2), 29-41.
- Siegel, G., & Sorensen, J. E. (1999). *Counting more, counting less*. Transformations in the management accounting profession. Institute of Management Accountants.

Deborah Maria de Sousa Nascimento, Editinete Andre da Rocha Garcia, Antonio Rodrigues Albuquerque Filho

- Silva, E. T. da (1992). *O ato de ler: fundamentos psicológicos para uma nova pedagogia da literatura*. São Paulo: Cortez.
- Spencer, L. M., & Spencer, S. M. (1993). *Competence at Work*. New York: John Wiley & Sons.
- Taylor, W. L. (1953). "Cloze procedure": a new tool for measuring readability. *Journalism Bulletin*, 30(4), 415-433.
- Tourinho, C. (2012). Refletindo sobre a dificuldade de leitura em alunos do ensino superior: "deficiência" ou simples falta de hábito? *Revista Lugares de Educação*, 1(2), 325-346.
- Valentim, M. L. P. (2008). Criatividade e inovação na atuação profissional. *CRB-8 Digital*, 1(1), 3-9.
- Witter, G. P. (1996). Avaliação da produção científica sobre leitura na universidade (1989/1994). *Psicologia Escolar e Educacional*, 1(1), 31-37.
- Witter, G. P. (1997). Leitura e universidade. In G. P. Witter (org.). *Psicologia: leitura e universidade* (pp. 9-18). Campinas: Alínea.