TEACHING SKILLS: A STUDY WITH ACCOUNTING TEACHERS IN RIO GRANDE DO SUL (BRAZIL)

Giovana Bolzan[1]
Maria Ivanice Vendruscolo[2]

▪ Received: 03/19/2021 ▪▪ Approved: 06/14/2021 ▪▪▪ Second Approved Version: 07/14/2021

ABSTRACT

Using as a theoretical basis the Matrix of Teaching Competences (Vendruscolo, 2015), this research aimed to analyze how professor at the undergraduate level apply teaching skills in Accounting Sciences in Rio Grande do Sul (RS), state of Brazil. This is a descriptive, quantitative survey study. Data was collected using an online questionnaire and was analyzed by means of descriptive statistics and factor analysis. The sample is composed of 243 professors and / or coordinators of on-campus undergraduate courses in RS, who teach disciplines in the professional education axis of the Accounting Sciences program. The results show professor display difficulties in applying teaching methodologies – such as teaching and learning theories - and in employing their knowledge on information technology. By means of empirical data, this article provides insights about the obstacles to the accounting teaching practice and how to overcome them.

Keywords: Teaching. Accounting Sciences. Teaching Skills. Teaching Competences. Accounting professor.

COMPETÊNCIAS DOCENTES: UM ESTUDO COM PROFESSORES DE GRADUAÇÃO EM CIÊNCIAS CONTÁBEIS NO RIO GRANDE DO SUL (BRASIL)

RESUMO

Utilizando como embasamento teórico a Matriz de Competências Docentes (Vendruscolo, 2015), a pesquisa objetiva analisar o grau de esforço e a frequência de mobilização das competências docentes pelos professores de graduação em Ciências Contábeis no Rio Grande do Sul (RS). Trata-se de um estudo descritivo,

[1] Mestre em Controladoria e Contabilidade pela Universidade Federal do Rio Grande do Sul - UFRGS. Endereço: Universidade Federal do Rio Grande do Sul, Faculdade de Ciências Econômicas, Departamento de Ciências Contábeis e Atuárias - Av. João Pessoa, 52 - Sala 11, Porto Alegre, RS – Brasil. E-mail: bolzangiovana@gmail.com.
https://orcid.org/0000-0002-7363-1183

[2] Doutora em Informática na Educação pela Universidade Federal do Rio Grande do Sul - UFRGS. Endereço: Universidade Federal do Rio Grande do Sul, Faculdade de Ciências Econômicas, Departamento de Ciências Contábeis e Atuárias - Av. João Pessoa, 52 - Sala 11, Porto Alegre, RS – Brasil. Telefone: (51) 3308-3487. E-mail: maria.ivanice@ufrgs.br.
https://orcid.org/0000-0002-2132-5029

quantitativo e de levantamento - por meio de questionário online. Os dados foram analisados por estatística descritiva e por análise fatorial. A amostra é composta por 243 professores e/ou coordenadores de cursos de graduação presencial no RS que lecionam disciplinas do eixo de formação profissional do currículo de Ciências Contábeis. Os resultados apontam haver dificuldades dos professores para operacionalizar as competências docentes e para aplicar conhecimentos de tecnologia da informação e das teorias de ensino e aprendizagem. O artigo contribui para a busca de melhorias no processo de atuação e de profissionalização dos docentes de Ensino Superior em Ciências Contábeis. Por meio de dados empíricos, auxilia a academia e a sociedade a identificar obstáculos às práticas docentes e a propor soluções para tais dificuldades.

Palavras-Chave: Ensino. Ciências Contábeis. Competências Docentes. Professor de Contabilidade.

1 INTRODUCTION

Current higher education is undergoing rapid and growing changes in educational, academic, social, and cognitive contexts. Scientific and technological development is responsible for part of the changes in the way teachers prepare their students for the market. Many higher education teachers did not have the systematic training necessary to build a professional identity for teaching and how to develop it in practice (Slomski, 2007; Libâneo, 2008). The need for more adequate teacher training is an instrument in the search for quality education (Libâneo, 2008). As highlighted by Laffin (2005), this situation also happens in the accounting area, where the transition process from student to teacher occurs without effective preparation for the practice of teaching accounting.

To satisfactorily addresses society's concerns, teachers must realize that educational practice is based on many elements that surround their lives (Libâneo, 2008; Miranda, 2010). According to Vendruscolo (2015), the teaching activity takes place in different contexts: (1) educational, related to the teaching-learning process; (2) academic, domain of specific disciplinary contents associated with the understanding of theoretical aspects; (3) cognitive, situations analysis, complex or not, to reflect, to promote self-reflection, to learn continuously; (4) social, engaging with students, communicating knowledge, discovering ideas and knowledge in clear teaching messages, engaging students, and working as a team.

Due to this complexity and considering that Accounting Science teachers are not pedagogically prepared to teach (Nossa, 1999; Swain & Stout, 2000; Farias & Araujo, 2016; Miranda, Carrazana, Pereira, Araujo, & Silva, 2017; Hillen, Laffin, & Ensslin, 2018; Lima & Araujo, 2019), and that in the last 20 years, many several problems related to the development of teaching skills persists, questions about qualitative aspects of *stricto sensu* pedagogical training in Accounting have become more relevant.

Studies shows that accounting *stricto sensu* teacher training programs mostly train researchers and are not always suitable for teacher training (Slomski, 2007; Slomski & Martins, 2008; Andere & Araújo, 2008; Miranda, 2010; Lapini, 2012; Masetto, 2012; Slomski, Lames, Megliorini, & Lames, 2013; Nganga, Botinha,

Miranda, & Leal, 2016; Miranda et al., 2017; Lima & Araújo, 2019; Farias, Stanzani, Lima, & Araújo, 2020). The pedagogical training and the development of didactic-pedagogical skills are neglected in their training, leaving teachers to develop them by individual efforts in their classroom practice (Swain & Stout, 2000; Laffin, 2005 ; Marshall, Dombrowski, Garner, Smith, 2010; Lapini, 2012; Slomski et al., 2013; Engel, Vendruscolo, & Bianchi, 2015; Miranda et al., 2017; Silva & Bruni, 2017; Hillen et al., 2018; Farias et al., 2020; Slomski, Anastácio, Araújo, Slomski, & Carvalho, 2020; Araújo, Leal, & Lourenço, 2021). Bolzan, Vendruscolo, Sallaberry and Diehl (2020) point out challenges that must be overcome in accounting education, especially those related to the qualification of teachers, students, and curriculum structure.

Didactic-pedagogical problems are faced by Accounting teachers in Brazil throughout their career (Araujo & Mello, 2014; Araújo, Lima, Oliveira, & Miranda, 2015; Nganga et al., 2016; Bolzan at al., 2020; Araújo et al., 2021) and that shows the need for consistent formal and continuing pedagogical training (Libâneo, 2008). Pedagogical training in graduate programs has been continuously recommended by studies in teaching Accounting in Brazil (Nossa, 1999; Giorgi, Pizolato, & Moretiin, 2001; Laffin, 2005; Andere & Araújo, 2008; Farias & Araújo, 2016; Araújo, 2017; Farias & Araújo, 2018; Hillen et al., 2018). International studies also highlight this weakness in the training of teachers in Accounting: Swain and Stout (2000), Marshall et al. (2010) and Del Mundo and Refozar (2013). Among these, some authors specifically investigate the theme of teaching skills, among which stand out: Nossa (1999), Swain and Stout (2000), Giorgi, Pizolato and Morettin (2001), Vasconcelos (2009), Marshall et al. (2010), Del Mundo and Refozar (2013), Slomski et al. (2013), Vendruscolo and Behar (2014b), Vendruscolo (2015, 2017), Zanella, Antonelli and Bortoluzzi, (2017), Alves and D'Souza (2018), Farias et al. (2020) and Araújo, Leal and Lourenço (2021). Increasingly, teaching skills mobilization has assumed a prominent position when research concerns higher education.

Thus, in order to contribute to empirical data and to this discussion, the question that motivates this research is: what is the frequency and the degree of effort of teaching skills mobilization by undergraduate professors in Accounting Sciences in Rio Grande do Sul (Brazil)? The study aims to analyze the frequency and the degree of effort of teaching skills mobilization by undergraduate professors in Accounting in Rio Grande do Sul using a survey research and data factorial analysis.

Teachers from Rio Grande do Sul were selected to the research based on the lack of previous studies that have characterized the teaching population in the region, as well as analyzes regarding their teaching skills mobilization. Furthermore, the limitation of the research to the state of RS was due to the lack of accessibility to a national register of teachers - the names and the e-mails was done manually on the Higher Education Institutions (HEI) websites and in articles published by the teachers, which made it impossible to expand the research to the whole country. Regarding the skills selected for analysis, it was decided to investigate, according to the study by Vendruscolo (2015), four among those considered more developed and two among the least developed.

Teach requires professional training (Libâneo, 2008), understanding how accounting professors mobilize their teaching skills contributes with empirical data, through professors and theorist's vision, for the debate and for the deepening of studies in postgraduate programs that result in effective improvements in teacher training. As mentioned, accounting *stricto sensu* programs focus primarily on

research (Nganga et al., 2016) and these training put aside teaching skills development, which are necessary for their classroom performance. It is expected that teachers are faced with doubts, concerns and questions that start to demand solutions in relation to their pedagogical practices. Although the analysis of other perspectives could generate relevant information, studying teacher's teaching skills, from their own perception, allows them to reflect on their pedagogical practice, which can help in their training process, contribute to the production of changes in their practices and, consequently, influencing the improvement of the teaching quality.

The study contributes to the discussion on the subject by highlighting the need for Higher Education Institutions (HEIs) to rescue the teacher role, rethink their training, build spaces for reflection on their pedagogical performance and to be concerned with the quality of teacher's work. It also contributes to Accounting students by highlighting the efforts of its professors to develop their skills and by emphasizing the relevance of the interaction between such agents in the teaching-learning process. It also contributes so that the accounting professional bodies can provide subsidies for continuing education programs that covers, in a systematic way, the pedagogical needs of the professors. The empirical data of the study add relevant information to accounting *stricto sensu* programs, to help them to review their curricula concerning aspects of teacher education, as well as to contemplate specific lines of research for Education in Accounting.

Finally, the study contributes theoretical and practical to respond to the concerns of society and the market, stimulating continuous improvements for Brazilian higher education, in general, and, specifically, for the accounting area. The study is limited to the analysis of the teacher's perception regarding the aspects of perceived effort and the frequency of teaching skills mobilization and not the cognitive and subjective aspects that occur in the process of developing teaching skills, which would require participant observation and knowledge construction theories as theoretical foundation.

2 THEORETICAL PLATFORM

2.1 Skills for Teaching in Accounting

Teaching requires professional training (Libâneo, 2008) and development of specific skills. Some Accounting authors seek to identify teaching skills: Nossa (1999), Swain and Stout (2000), Giorgi, Pizolato and Morettin (2001), Vasconcelos (2009), Marshall et al. (2010), Del Mundo and Refozar (2013), Slomski et al. (2013), Vendruscolo (2015, 2017), Zanella et al. (2017), Alves and D'Souza (2018), Farias et al. (2020) and Araújo et al. (2021).

According to Vendruscolo (2015, p. 52), "teaching skills represents the set of competencies (knowledge, skills and attitudes) related to each other that the teacher mobilizes and articulates to achieve educational goals and to resolve situations arising in the process of teaching and learning". The author charted a matrix of teaching skills: knowledge, skills, and attitudes for undergraduate Acconting courses in Brazil related to agreement, importance, relevance and level of development. The Matrix of Teaching Competencies in Accounting, resulting from the research, is formed by a set of eighteen competencies from the Educational, Cognitive, Social and Academic classes, which encompass many

teachings, research, and extension activities, inherent to the nature of the teaching practice (Vendruscolo, 2017). The author identified that the most developed skills are technical; communication; didactics; autonomy and reflection – the first also judged as the most important competences in the opinion of the 398 participating teachers in Brazil. The study also exposed that among the partially or poorly developed competences are the pedagogical, technological, and political competences. The analysis of this research was based, under the academic, educational, social and cognitive contexts, on the following skills: technique, communication, didactics, reflection (four of the most developed), pedagogical and technological (two of the least developed).

Technical competence is related to mastering the content, effective ways to develop it with students (Pereira, 2007; Miranda, 2010), practical application of knowledge, which is closely linked to the context of teacher action and to their way of teaching (Tardif & Raymond, 2000). Due to the internationalization of accounting practices, professors who are not constantly updated will have difficulties in proposing teaching activities that actually prepare future professionals (Vasconcelos, 2009). This search for updating involves the continuing education of teachers, which, according to Laffin (2005), should not be restricted to updating courses, it being the responsibility of both the institution and the teacher to carry it out.

The development of communication skills is an important aspect of the teacher's daily life, given that the teaching process depends, fundamentally, on effective communication. Failures in this communication process tend to reflect difficulties by the students to assimilate the subjects addressed by the teacher (Vasconcelos, 2009). This is one of the best evaluated competences by students as relevant to a good teacher (Vasconcelos, 2009; Miranda, Casa Nova, & Cornacchione Jr., 2012). The teacher must be able to hear, process and understand the message, express themselves clearly, use appropriate terminology, tone of voice, must argue with consistency and propriety, relate well with colleagues, use feedback properly, facilitate interaction between the parties involved, among others (Libâneo, 2008; Vasconcelos, 2009; Farias, 2016).

Issues related to teachers' didactic and pedagogical skills have been constant concern in the accounting literature. Studies shows that the pedagogical preparation of Accounting teachers is far away from what is necessary (Nossa, 1999; Laffin, 2005; Andere & Araújo, 2008; Marshall et al. 2010; Miranda et al. 2012; Vendruscolo & Behar, 2014). In this research, these competences are treated together, as they are intrinsically related in the academic context; the development of one presupposes the increase of the other for a proper exercise of teaching.

The Pedagogical practice is a space for the professional knowledge construction (Slomski & Martins, 2008) articulated from teaching experiences, knowledge of pedagogy, didactics, and the process of collective exchange of experiences and practices, allowing teachers to develop critical and reflective awareness and professional learning (Miranda, Santos, Casa Nova, & Cornacchione, 2013). Vendruscolo (2015) mapped the didactic and pedagogical skills of Accounting Science teachers, listing, as didactic ones, the skills of: didactic content knowledge, materials production, content presentation, discussions conducting, objectivity, practices theorizing, pedagogical mediation and tutoring, students challenging, teaching practices building, cognitive tasks supporting in order to clarify doubts and provide feedback; and, in relation to the

pedagogical ones, the competences: knowledge of the teaching-learning process and of the learning stages of development, learning styles, how knowledge happens at each stage of development and the process understanding, pedagogical design of the teaching activity, adjusting their pedagogical practice. These skills are, according to Vasconcelos (2009), 'absolutely' necessary for a teacher, because they are able to improve their performance in the knowledge construction. It is because of the development of this competence that a greater commitment to classroom issues arises; it represents the teacher's quality differential, preparing them for the social changes.

The teacher has a relevant role in the production and structuring of pedagogical knowledge, and that's why the teacher must have an active and reflective role in education, not only a technical role reduced to the execution of norms, recipes or application of external theories. For Slomski and Martins (2008, p.6) "The reflective model is essential in teachers' education, especially in the Accounting, as it aims to develop attitudes and skills that problematize to reach the teacher's personal and professional autonomy". The teaching based on reflective model ensures the existence of a teacher who frequently examines the results of their actions, attentive to the changes that occur, concerned with student learning, who makes space to reflect and improve the teaching-learning process during to their practice (Frauches, 2015).

New technologies skills have been increasingly required due to the growing modernization of the communication. The current teacher has a new learning atmosphere: the virtual learning environment (Masetto, 2012). Owing to the IT, now is possible to multiply environments and learning strategies far beyond the classroom and they have been widely used in education as tools to support teaching activities, giving a more active role to Education, favoring interaction, collaboration, and cooperation (Costa, Duqueviz, & Pedroza, 2015). This leads to the constantly rethink of what needs to be improved, both in people and organizations, in order to adapt to the new trends of reality (Vasconcelos, Cavalcante, & Monte, 2012).

2.2 Related Studies

National and international studies have been investigating teacher education under different aspects: Andere and Araújo (2008), Frauches (2015), Araújo et al. (2015), Lima et al. (2015), Vendruscolo (2015), Perazo, Machado, Cruz and Quintana (2016), e Farias et al. (2020).

Andere and Araújo (2008) analyzed the training of the Accounting teacher and identified that, firstly, the programs are aimed at training researchers with theoretical and specific knowledge in the accounting area and, secondly, at pedagogical training encouraging teaching and the development of didactic-pedagogical skills. Marshall et al. (2010) researched about the accounting teaching with American professors and found that, when one intends to become an effective Accounting professor, there would be no qualification capable of replacing the experience in teaching and in accounting practice.

Frauches (2015) delineate the profile of knowledge that underlies the pedagogical practice of teachers who work in an Accounting course and found that the practical knowledge, built in the teachers' action, is permeated by beliefs,

values and ethical principles from their trajectories and experiences as teachers and as accountants.

The studies by Araújo et al. (2015) and Lima et al. (2015) researched the main problems faced by Accounting teachers in Brazil in their career entry, during the career and later stages and the problems faced by teachers in their functions, highlighting the need of a pedagogical training for Accounting teachers that can enable them to deal with student diversity and motivation students' tools.

Perazo et al. (2016) evaluated the profile of Accounting professors at three public HEIs in RS (Brazil), in terms of academic, pedagogical and professional qualifications, and found that a small number of professors took some complementary course in the pedagogical area throughout the career, that shows the need to invest in additional qualifications, especially in the academic and pedagogical spheres.

Vendruscolo (2015) prepared the Matrix of Teacher Competencies in Accounting, which includes 18 competencies that reveal the activities of teachers in academic instances of teaching, research and extension and the administrative and bureaucratic activities of the daily work, grouped into four classes: i) Educational: skills related to the teaching-learning process - Curriculum, Pedagogical, Methodological, Technological, Didactic and Evaluative; ii) Cognitive: intellectual teachers' activities, covering the skills Planning, Organization, Reflection, Analysis, Management and Autonomy; iii) Social: encompass Communication, Teamwork, Affective and Political skills; iv) Academic: related to the area of specific knowledge and scientific knowledge, comprising Technical and Research skills.

Farias et al. (2020) analyzed how professors with degrees in Accounting perceive possible training spaces for the teaching profession. The survey revealed that self-training is the training space that most contributes to the development of skills for teaching. The authors grouped the competences analyzed into three factors as formative spaces for teaching, namely: Graduate Programs, Institution of Higher Education as a labor space, and Self-training.

As shown by the studies, Accounting teacher training is theoretical, while didactic-pedagogical training is relegated to the background, when it should be prioritized (Nganga et al. 2016). The studies also highlight the individual efforts for the teaching development skills and the need of greater commitment to the teacher's continuing education, especially in relation to pedagogical training. This research differs and complements the others researches by analyzing the teaching skills mobilization under the perception of undergraduate accounting professors in RS (Brazil).

3 METHOD

The study is classified as quantitative and descriptive research (Colauto & Beuren, 2018). As technical procedure was used the survey through a cross-section questionnaire.

The population is made up of professors from the in-person undergraduate Accounting courses in the state of Rio Grande do Sul (RS), Brazil. The research of HEIs was carried out on the e-Mec website on March 1st, 2017, identifying 117

courses, 92 of which are taught in person at 67 different HEIs. A database including name, university, and e-mail address of 643 professors was made. However, it was not possible to know the number of teachers in the researched region, since there is no publicly accessible register of teachers, which made it impossible to calculate the probability of each individual being selected in the sample (Colauto & Beuren, 2018). The sampling was carried out by accessibility, so it's classified as non-probabilistic. The criteria for sample selection were: i) to be a professor and/or coordinator of an in-person undergraduate course in Accounting, in the state of Rio Grande do Sul, Brazil, at the time of data collection; ii) teach subjects in the professional training axis of the Accounting curriculum.

Data were collected through a questionnaire, which included two blocks of questions: i) data for the characterization of the respondents: gender, age group, length of teaching career, region of activity, workload, average number of students per class, operating HEI, average number of subjects taught per semester in face-to-face and online learning, preparation for teaching practice, HEI's posture about teaching activities, academic training, training for teaching and development of teaching skills; ii) data to identify the effort degree perceived by teachers and the frequencies to operationalize teaching skills. Each block of the questionnaire was elaborated considering the research objectives and the theoretical foundation.

The questions related to effort and frequency were presented on 5 (five) points Likert scale, which enable to measure the intensity of the respondent's opinion (Likert, 1975). The scale used to effort was (1) very difficult, (2) difficult, (3) neither easy nor difficult, (4) easy, (5) very easy; and, to frequency, it was (1) never, (2) rarely, (3) sometimes, (4) many times, and (5) always. The questionnaire's pre-test with six professors representing the group of individuals to be studied was in July 2017. The final version was available on the Google Forms electronic platform, so that it could be accessed through the link provided in the invitation to participate of the survey. The questionnaires were sent three times - from July 31, 2017, to September 18, 2017. At the end, were obtained 243 valid responses.

The analysis was performed in four steps. Firstly (step 1), the research components were analyzed and evaluated using descriptive statistics (Gujarati, 2006), and it revealed frequency distributions, position measures (arithmetic mean, median and mode), dispersion measures (total amplitude and standard deviation), comparison of frequency (percentage and rates). Pearson's chi-square test was used to verify whether there was an association between variables related to attitudes and the type of HEI (Hair, Black, Babin, Anderson, & Tatham, 2019). In step 2, was analyzed the respondents' perception about the difficulty degree or ease degree with which certain skills and attitudes are expressed through 22 questions evaluated using a five-point Likert scale. To determine the effort degree, it was considered: high ("very difficult" and "difficult"), moderate ("neither easy nor difficult") and low ("easy" and "very easy"). Cronbach's alpha (α) (0.936) indicates internal consistency and robustness of the questionnaire. In Step 3, the sample teachers were asked through another 22 questions evaluated with a Likert scale of 5 (five) points: never, rarely, sometimes, often and ever, to analyze the frequency of certain skills and attitudes execution. Cronbach's alpha (α) (0.886) indicates questionnaire's consistency (Hair et al., 2019) and internal robustness.

In Step 4, a factor analysis was carried out set by the Bartlett's sphericity and Kaiser-Meyer-Olkin (KMO) sample adequacy tests, followed by the reliability

analysis using Cronbach's alpha coefficient (Field, 2009). For the effort variables, Bartlett test was highly significant ($p<0.001$), which indicates that there are enough correlations for the following analysis (Field, 2009). KMO Test was 0.930, that means that exists correlation between the variables and an excellent level of adequacy of the data factorial model (Field, 2009). For frequency variables, the KMO obtained was 0.872. Bartlett's Test for sphericity is significant ($p<0.05$) and Cronbach's Alpha Coefficient (0.886) meets the criteria recommended by Hair et al. (2019) for the factor analysis. Once verified the possibility of using factor analysis, we proceeded to extract the factors. For this, was used the Scree Test and the Kaiser criterion. Was adopted a minimum of 60% as explained variance percentage criterion, in order to ensure significance for the determined factors to explain at least such amount of variance (Hair et al., 2019). The extraction resulted in 4 (four) factors of effort variables and 6 (six) factors of frequency variables.

4 RESULTS AND DISCUSSIONS

The research results are presented in 3 sections: (4.1) Research subjects, (4.2) Analysis of the effort degree and frequency degree to mobilize teacher's competencies and (4.3) Teaching competencies mobilization matrix.

4.1 Research Subjects

The characteristics of the research subjects were compiled in order to compose an overview of the sample, which is composed of 243 professors, of which 194 teach exclusive subjects of the curriculum (79.8%) and 49 teach other subjects of the curriculum (20.2%). There was a male predominance (57.6%) in the teaching career in the state of Rio Grande do Sul, which is in line with the findings described by Araújo et al. (2015) and Frauches (2015). The average age of respondents (45.2 years) reveals a sample formed predominantly by mature and experienced teachers. The distribution of age frequencies proved to be reasonably symmetrical around the mean (most of the teachers were between 30 and 51 years old). This result was also evidenced by Frauches (2015) and by Farias (2016).

The respondents' average teaching career was 13.4 years. The phase in which were the highest number of participants, according to Huberman (2000), is diversification or questioning (64.6% of respondents), followed by the stabilization phase (16.5%). The number of professors in each phase resemble to Araújo *et al*. (2015), by Farias and Araújo (2016), by Araújo, Miranda and Pereira (2017) and by Farias et al. (2020) findings, including the percentage of teachers in each phase of the cycle. Most teachers (82.6%) do not exclusively teach; however, he works more than 12 hours and less than 20 hours by week, which is equivalent to a daily shift dedicated to teaching in 20 and 50 students (77.8%) classes, and the majority (86.8%) teaches exclusively in private institutions.

About the academic training, 166 professors (63.8%) have a degree in Accounting, 53 (20.4%) in related areas (Administration and Economics) and 41 (15.8%) in other areas of knowledge. 207 professors (85.9%) have a *lato sensu* specialization completed or in progress, 212, a master's degree completed or in progress (88.0%) - of which 61 in Accounting -, 84, a doctorate completed or in

progress (34.9%) - of which 8 in Accounting - and 4 completed postdoctoral (1.7%) - of which only one concluded in Accounting.

The question about training for teaching in Higher Education was presented in multiple marking format - many answers could be selected as consistent with the reality of the teacher -, as shown in Table 1.

Table 1
Teaching training

Regarding training for teaching in Higher Education, indicate the options you have already taken: (there may be more than one answer)	**Answers**		**% of cases**
	nº	**%**	
Subject of Methodology in Postgraduate Higher Education	198	22,9%	81,5%
Teaching preparation program offered by the Higher Education Institution that you work	141	16,3%	58,0%
Didactic-pedagogical training courses	132	15,2%	54,3%
Technical training courses	123	14,2%	50,6%
Educational training courses (Higher Education context)	90	10,4%	37,0%
Supervised internship	67	7,7%	27,6%
Lato sensu postgraduate course at Education	49	5,7%	20,2%
Stricto sensu postgraduate course at Education	35	4,0%	14,4%
Did not attend courses in training for teaching	26	3,0%	10,7%
Other - an undergraduate course in the educational area or a degree in other areas	5	0,6%	2,1%
Total observations	**866**	**100%**	**-**

Note: nº = number of responses.
Source: prepared by the authors.

The results shows (Table 1) that 81.5% of the professors attended a postgraduate course in Higher Education Methodology, 58% attended a teaching preparation program offered by the Institution of Higher Education they work, and 54.3% participated in courses in didactic-pedagogical training. 10.7% of the teachers did not attend courses in training for teaching. However, the results show an improvement in the pedagogical qualification of Accounting teachers comparing to previous studies results, signaling the concern of RS teachers with their continuing education.

These findings reveal the development of teachers qualification in Accounting Science and may indicate that, according to Silva et al. (2019), the Teaching Methodology discipline contributes to the teachers starting careers training, allowing knowing relevant content related to didactics and enabling its application in different teaching strategies; and providing a reflection on teaching methods and the improvement of techniques used in the educational environment for teachers already working in. Contact with specific teaching content could enable Accounting professors in graduate programs to adopt differentiated teaching strategies in the classroom (Barbosa, Leal, & Nganga, 2019).

In Figure 1, the results are shown about the support for the participation of professors in research projects and scientific events, the offer and support for the participation in preparation programs for teaching, the proposition of activities that enable the improvement and pedagogical training and the financial incentive for academic improvement or for participation in events.

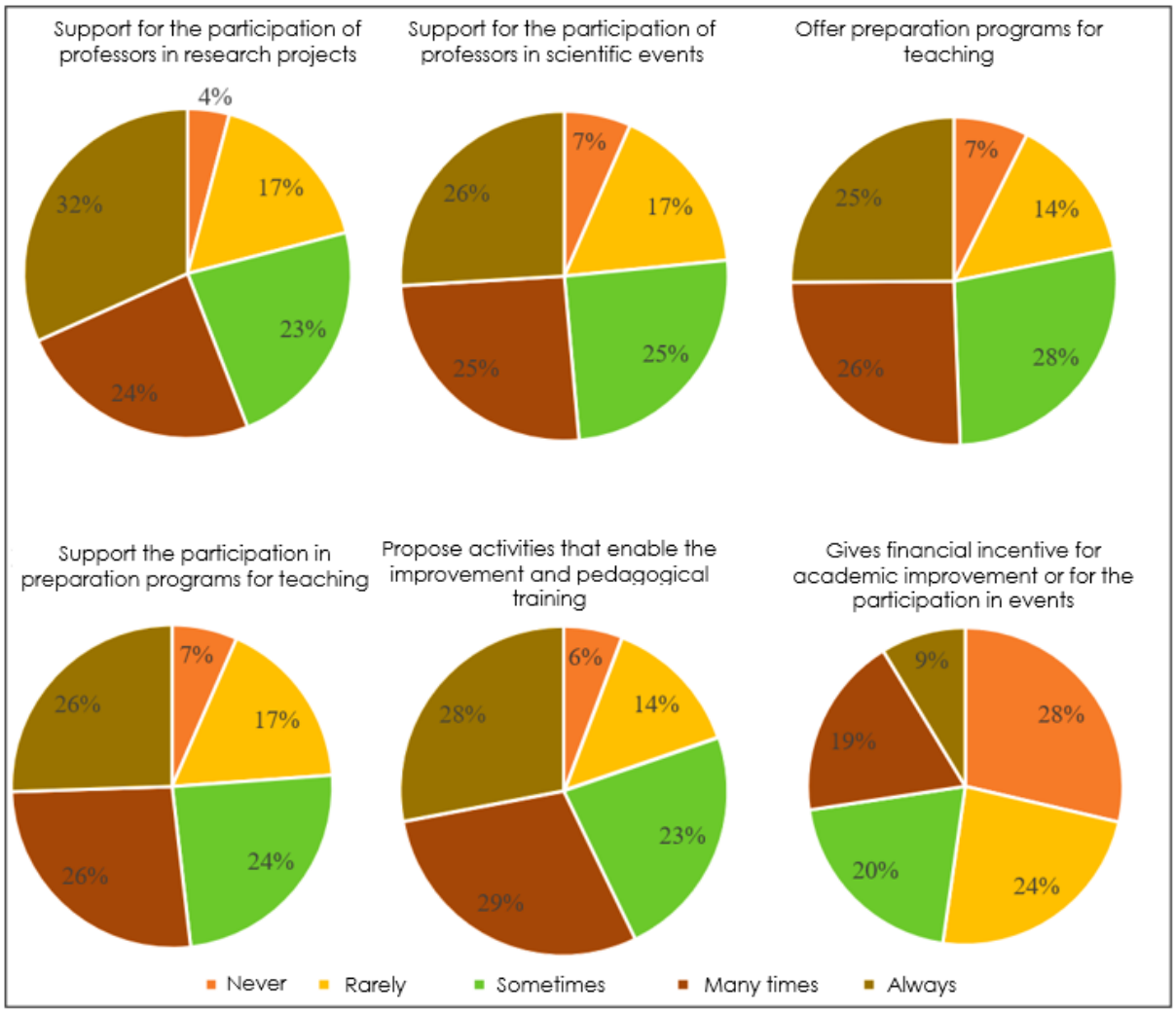

Figure 1 – Frequencies of the HEIs attitudes in supporting training activities.
Source: elaborated from research data.

In general, HEIs support the professor's participation in research projects, events, preparation programs for teaching, including offering these activities, and proposing pedagogical training activities "always" or "often" in 56% of the times, revealing that there is a concern by HEIs with such aspects of the continuing education of the Accounting Sciences teacher. Despite this, more than 50% of professors indicated that there is "never" or "rarely" financial incentives from HEIs for academic improvement or for events participating. The role of educational institutions giving investments in pedagogical training for teachers is important to prepare them more adequately to work in the classroom (Barbosa et al., 2019).

The analysis of Pearson's Chi-square Test indicates that there is a significant positive association between attendance "always" support the professor's participation in research projects and "public institutions" and between attendance "rarely" support the professor's participation in research projects and "private institutions". Thus, it is clear that public educational institutions tend to encourage more often the participation of professors in research projects than private institutions. Regarding to financially encouraging academic improvement or the participation of professors in events, there was a significant positive

association between attendance "never" and "private institutions", which shows a lower propensity of private HEIs to provide financial incentives for the academic improvement or for the participation of the professor in events. The results also revealed that public institutions are more likely to financially encourage teachers to participate in events than private ones.

From another aspect of teacher training, Table 2 shows the frequency that teachers, in the last two years, participated in events, developed projects, or promoted their own continuing education.

Table 2
Frequency of participation in continuing education events - in (%)

Question (in relation to the last two years)	Never	Rarely	Some-times	Many times	Always
Participated in technical improvement courses	5,0	12,0	36,9	27,8	18,3
Participated in teaching preparation courses	15,1	20,6	37,0	18,5	8,8
Participated in scientific events (congresses, seminars, symposia, etc.) in the area or related areas	2,9	7,0	33,7	32,9	23,5
Participated in scientific events (congresses, seminars, symposia, etc.) in the educational area	18,3	23,8	31,3	17,9	8,8
Participated in events in the pedagogical area	19,7	28,2	29,1	15	8,1
Developed research projects	11,7	18,8	30,5	18,4	20,5
Had articles published in scientific events or journals	19,0	14,9	30,2	16,1	19,8
Had book(s) of his authorship published	59,7	13,1	11,9	7,2	8,1
Promoted their continuing pedagogical training	19,2	22,2	26,4	19,2	13,0
Promoted their continued reflective training	13,6	22,3	26,0	23,6	14,5

Source: Prepared by the authors.

A significant contingent of teachers never participated in scientific events in the educational area (18.3%), nor had articles published in scientific events or journals (19%) and rarely or never developed research projects (18.8% and 11 .7%, respectively). From another aspect of teacher training, participation in technical improvement courses is a prioritized item by teachers, given that 46.1% of teachers participate "always" or "many times" in this type of event. Although more than 50% of HEIs have offered teacher preparation programs (79%) and supported participation in these programs (76%), the findings point to the fact that participation in technical improvement courses is prioritized over participation in preparation courses for teaching and in events in the pedagogical area. This indicates that there is a significant level of concern for the need for qualification and technical improvement. Likewise, the participation of teachers in preparation courses for teaching and events in the pedagogical area occurs sometimes (36.2% - 88 teachers), often (18.5%) and always (8.8%), totaling 63.5% of the sample.

According to Marshall, Smith, Dombrowski and Garner (2012), it is ideal that there is a balance between practical and theoretical knowledge and that the teacher is always looking for updating, which would involve attending professional events, participating in or ministering congresses, seminars, academic or professional conferences, in addition to publishing articles. Participation in events in the educational area is relevant for teachers because this type of activity allows

the discussion of current issues, in addition to contact with professionals from other areas and the exchange of information about common interests.

Pedagogical and reflective continuing education, as pointed out by Libâneo (2008), is relevant for accounting professors (Lapini, 2012; Miranda et al., 2012). According to Laffin (2005), it should not be restricted to refresher courses, but should be sought in the teacher's daily practice, in the dialectical action-reflection-action movement. This permanent learning must be understood as the responsibility of both the institution and the teacher.

HEIs often (51%) support the participation of accounting professors in scientific events and (56%) support their participation in research projects; despite this, a representative number of professors never had published articles in scientific events or journals (19%) and rarely (11.7%) or never (18.8%) developed research projects. Almost 60% of the professors have never had a book of their own published.

Teachers, in 40% of situations, "never" or "rarely" promote their continuing pedagogical training and their continued reflective training. Araujo (2017) states that accounting science teachers need additional training, because since in their original training as a bachelor's degree, there is no provision for preparation for this, and this training would come from long or short-term specialization courses, individual searches and academic training through master's and doctoral programs. This training should be provided by HEIs, considering that it is fertile ground for effective collaboration and qualification of those who study there and those who teach there (Farias & Araújo, 2016).

More than 50% of the professors participated "many times" (32.9%) or "always" (23.5%), in scientific events (congresses, seminars, symposia, among others) in the area or from related areas in the last two years and, more than a quarter (26.7%), from scientific events in the educational area. The data reveal that the Accounting Sciences professors in RS are seeking to develop their pedagogical skills, contrary to previous studies that indicated a reduced number of professors who had taken some complementary course in the pedagogical area throughout their career. Perazo et al. (2016) points to the existence of a greater concern of teachers to participate in events and courses in their area of expertise than in the educational area.

In turn, Table 3 provides information about how the teacher believes that their pedagogical skills were developed.

Table 3
Development of teaching skills

Do you believe that your teaching skills have been developed: (there may be more than one answer)?	**Answers**		**% of cases**
	nº	**%**	
From individual efforts	187	29,4%	77,0%
In educational institutions where he works/has worked	175	27,5%	72,0%
In *stricto sensu* graduate programs	115	18,1%	47,3%
In *lato sensu* graduate programs	94	14,8%	38,7%
In basic training	58	9,1%	23,9%
Does not believe that specific training courses are necessary for the exercise of teaching	7	1,1%	2,9%
Total	**636**	**100%**	**261,7%**

Note: nº = number of responses.
Source: Prepared by the authors.

The data collected show (Table 3) that, among teachers, the conception that the development of pedagogical skills takes place mainly from individual (29.4% of responses) and in the educational institutions where he/she works (27.5%).

As for the perception of teaching practice, 57.6% of the teachers in the sample indicated that they totally agree with the fact that they are prepared for the exercise of higher education accounting teaching; 38.3% partially agree and 3.3% partially or totally disagree with the statement. Thus, most professors (95.9%) believe they are more prepared than unprepared for the exercise of higher education, so that the findings are similar, in part, to those of Farias (2016).

Among the professors, there is a predominant view that the development of pedagogical skills takes place, mainly, from individual efforts to train teachers (29.4% of responses) and in the educational institutions where they work/worked (27.5%). The Accounting Sciences professors in RS, 77% sought, through their own initiatives, their training and the development of their teaching skills. Likewise, 72% of the professors believe that their pedagogical skills were developed based on the initiatives of the teaching institutions in which they operate, but only 47.3% of the respondents indicated that this occurred in *stricto sensu* graduate programs.

Overall, the data confirm Swain and Stout (2000) and Slomski (2009) findings - most efforts to develop didactic-pedagogical skills in teacher education are based on individual effort. Likewise, it corroborates the findings of Farias (2016) and Farias et al. (2020) that self-interest training has been supplying the search for teacher training. This result corroborates the three factors listed by Farias *et al*. (2020), as possible training spaces for teaching: Graduate Programs, Higher Education Institution - HEI (as a workspace) and self-training.

Furthermore, the research shows that there is a significant contribution of *stricto sensu* Postgraduate Accounting Programs to pedagogical training – although the focus of these training spaces is more related to the training of the researcher (Slomski, et al., 2013; Nganga et al., 2016) –, however, the percentage of cases reveals that there is greater relevance of the individual efforts and in the workplace for the pedagogical skills development. The results also suggest the same direction as the findings by Farias et al. (2020) and Farias and Araujo (2016), that self-training is the training space that most contributes to the development of training for teaching.

On the other hand, the analysis shows that, unlike the reality presented by Farias at al. (2020) - which report incipient, isolated initiatives, generally punctual and, for the most part, gestated and carried out in an institutional scope -, HEI as a professional locus represent, in RS, an important training space - perhaps not enough – in the development of teaching skills and in the improvement of teaching activities. The fact is that the importance of creating opportunities and spaces for teacher training should be highlighted where it is possible to develop didactic-pedagogical skills (Hillen, Laffin, & Ensslin, 2018) and that it is also the role of HEIs as a professional space to invest more in the pedagogical training of its teachers, in order to prepare them in a more adequate way for acting in the classroom.

However, as professional teacher development occurs through a non-linear process, there is no consensus on how this process can be approached in teacher education programs (Farias & Araujo, 2018). The teacher training in *stricto sensu* graduate programs, despite the low offer of subjects that help in pedagogical

training, it is indicated by 18.1% as a relevant training space for the pedagogical competence's development, which confirms the findings of Silva, Ferreira, Leal and Miranda (2019). By the way, is important to (re)think the professional insertion of new teachers, as well as their uncritical and technical training, in addition to bringing up reflections on the teacher's role towards the new generations, their new challenges and the educational institutions role to a most adequate preparation for acting in the classroom (Lima & Araujo, 2019).

4.2 Analysis of the effort degree and frequency degree to mobilize teacher's competencies

In the context of pedagogical practice, the issues of analysis of the perception of effort to mobilize teaching skills are presented in Table 4.

Table 4
Questions of perception of the effort to mobilize teaching skills (medium)

Dimension of competences	Question	Medium (μ)	Standard Deviation (σ)
Pedagogical	1. I plan and organize teaching activities based on how I think knowledge happens	2,91	0,856
Pedagogical	2. I design teaching activities considering learning theories from a pedagogical perspective	2,68	0,887
Technological	3. Preparation of teaching material to support course activities using information and communication technologies	3,04	0,906
Technique	4. I follow changes that involve the technical knowledge of the disciplines I teach	2,91	0,939
Technological	5. I explore new technological learning environments	2,70	0,830
Technique	6. I apply the contents of the subject(s) I teach with sufficient technical knowledge	3,19	0,940
Technique	7. I link the contents taught in class with those of other subjects in the course and/or other areas of knowledge	3,23	0,885
Technique	8. I relate the contents taught in class with knowledge built in teaching practice and professional practice	3,44	0,886
Reflection	9. I reflect with students on the contents taught in the classroom and on global aspects of science and society	3,07	0,888
Communication	10. I inform and involve students in my classes	2,86	1,005
Communication	11. I communicate clearly and objectively, making myself easily understood	3,11	0,947
Communication	12. I use different communication strategies in class (dialogue, conversation, interlocution, writing)	3,10	0,885
Didactics	13. I support students in cognitive tasks	2,98	0,818
Communication	14. I am ready to meet the demands of students	3,32	0,888
Communication	15. Encourage students' critical thinking	2,74	1,068
Didactics	16. Encourage and challenge students to search for new knowledge	2,69	1,056
Didactics	17. I exercise pedagogical mediation and advise students	2,85	0,810
Pedagogical	18. I apply, in the classroom, knowledge of teaching and learning theories	2,75	0,831

Dimension of competences	Question	Medium (μ)	Standard Deviation (σ)
Technological	19. I apply new technologies in the teaching and learning process	2,72	0,810
Technological	20. I keep myself technologically up to date	2,80	0,915
Reflection	21. I reflect on my teaching practice before, during or after the action	2,84	0,859
Reflection	22. I promote improvements in the teaching-learning process	2,69	0,843

Source: Prepared by the authors.

The analysis of the perception of the effort needed to mobilize certain teaching skills reveals (Table 4) that, in fourteen (14) questions, teachers believe they have more difficulties than facilities; in other words, in 63.6% of the competences, the teachers had high degrees of difficulties to mobilize the teaching competences. The professors thought they had more facilities in relation to questions in the scope of technical (6, 7 and 8) and communication (11, 12 and 14) competences. In relation to reflexive (9) and technological (3) competences, in two questions it was noticed the expenditure of low effort to mobilize teaching competences. For all questions related to pedagogical (1, 2 and 18) and didactic (questions 13, 16 and 17) competences, it was verified the expenditure of high levels of effort for this, in the same way as most reflexive questions (15, 21 and 22) and technological (5, 19 and 20). Therefore, on average, teachers showed high levels of efforts to mobilize teaching skills (μ=2.939 and σ= 0.898), which indicates that there are, proportionally, more teachers with difficulties than with facilities to do so.

As for the result of the analysis of the relative frequencies for mobilizing teaching skills (classified as high, moderate and low) it shows that, on average, Accounting Science teachers in Rio Grande do Sul (Brazil) operationalize their teaching skills with high frequency (μ=4, 23 and σ=0.721). This data is in line with the findings of Swain and Stout (2000) that most teachers would not be adequately prepared to teach. In addition to considering themselves prepared for this, the professors operationalize skills and attitudes with high frequency. The results of the frequency presented in the operationalization of teaching skills can be considered strategic and determinant for the consolidation of curricular practice in the classroom context and would be, according to Verdum (2013), closely associated with teacher training and the construction of teacher knowledge.

4.3 Teacher Competence Mobilization Matrix

The mobilization of teaching skills was analyzed within the scope of effort and frequency, and, for this purpose, two matrices were built (perception of effort and frequency) based on the factor analysis performed. The results are presented in the following subsections.

4.3.1 Effort Perception Matrix

The results obtained in the Factorial Loads Matrix (Table 5) indicate that Factor 1 has higher weights in the variables: 16, 15, 17, 10, 13, 11, 22, 14 and 21. The second factor comprises a group of five variables: 7, 8, 6, 9 and 12. The third factor encompasses the variables: 19, 20 and 18. The fourth and last factor gathers the variables: 2, 1, 4 and 3. For the extracted factors, all alphas were greater than 0.7, which is considered highly satisfactory, given the lower acceptability limit of 0.6, according to Hair et al. (2019).

The Matrix of the Effort Perception for Teaching Competencies Mobilization by undergraduate professors in Accounting in Rio Grande do Sul (Brazil) was elaborated using the factors resulting from the factor analysis. Table 5 presents the matrix indicating the factors resulting from the statistical analysis, a description created for each factor, the number of the question and the question contained in the data collection instrument and the indication of the teaching competence to which it belongs, according to Vendruscolo (2015).

Table 5
Effort Perception of Teaching Competencies Mobilization by undergraduate professors in Accounting in Rio Grande do Sul Matrix (Brazil)

Factor	Factor name	Cronbach's Alpha	Question	Questions (Effort Perception)	Competence
1	Knowing how to be a teacher and mediate the teaching-learning process	0,881	16	Encourage and challenge students to search for new knowledge	Didactics
			15	I encourage students' critical thinking	Communication
			17	I exercise pedagogical mediation and advise students	Didactics
			10	I inform and involve students in my classes	Communication
			13	I support students in cognitive tasks	Didactics
			11	I communicate clearly and objectively, making myself easily understood	Communication
			22	I promote improvements in the teaching-learning process	Reflection
			14	I am ready to meet the demands of students	Communication
			21	I reflect on my teaching practice before, during or after the action	Reflection
2	Domain and communication of specific content	0,840	7	I link the contents taught in class with those of other subjects in the course and/or other areas of knowledge	Technique
			8	I relate the contents taught in class with knowledge built in teaching practice and professional practice	Technique
			6	I apply the contents of the subject(s) I teach with sufficient technical knowledge	Technique
			9	I reflect with students on the contents taught in the classroom and on global aspects of science and society	Reflection
			12	I use different communication strategies in class (dialogue, conversation, interlocution, writing)	Communication
3	Information technology knowledge to improve the teaching process	0,826	19	I apply new technologies in the teaching and learning process	Technological
			20	I keep myself technologically up to date	Technological
			5	I explore new technological learning environments	Technological
			18	I apply, in the classroom, knowledge of teaching and learning theories	Pedagogical
4	Mastering learning theories, knowing how to think critically about them and applying them in teaching practice	0,770	2	I design teaching activities considering learning theories from a pedagogical perspective	Pedagogical
			1	I plan and organize teaching activities based on how I think knowledge happens	Pedagogical
			4	I follow changes that involve the technical knowledge of the disciplines I teach	Technique
			3	Preparation of teaching material to support course activities using information and communication Technologies (ITC)	Technological

Source: Prepared by the authors.

Factor 1 – Knowing how to be a teacher and mediating the teaching and learning process – explains 19.04% of the total variability and stems from nine questions related to the mastery of elements of didactic and communication skills. The question with the highest factor loading is 16 (0.776): "I encourage and challenge students to seek new knowledge". The factor is mainly related to the role that the teacher plays as a mediator in the teaching-learning process, helping the student to seek knowledge and build it, in addition to the concern with the students' understanding.

Factor 2 - Domain and communication of specific content – explains 16.09% of the total variability and arises from five questions related to the teacher's domain in the application and form of communication of the specific content of the discipline. The question with the highest factor loading is 7 (0.788): "I relate the contents taught in class with those of other subjects in the course and/or other areas of knowledge". This factor is also related to the teacher's concern with the professional's overall training, as the student is seen as a future professional in the market, who will have to deal with diverse and multidisciplinary situations.

Factor 3 – Information technology knowledge to improve the teaching process – explains 13.7% of the total variability and arises from four questions related to information technology knowledge to improve the teaching process and the application of teaching and learning theories. The question with the highest factor loading is 19 (0.818): "I apply new technologies in the teaching and learning process". This factor is related to the faculty's ability to keep up-to-date in relation to these technologies used in the teaching process, knowledge of information technology to improve the teaching process and the application of teaching-learning theories. The relationship of the questions allows us to perceive that the professor tries to make an effort to get in touch with the world and with the student's baggage, who lives in a time of constant technological improvement, in addition to seeking ways to engage, captivate the student and facilitate their learning and interest.

Factor 4 – Mastering learning theories, knowing how to think critically about them and applying them in teaching practice – explains 11.77% of the total variability and stems from four questions related to pedagogical knowledge and mastery of learning theories. The question with the highest factor loading is 2 (0.743): "I design teaching activities considering learning theories from a pedagogical perspective". This factor is linked to the design of teaching activities and technical and technological knowledge as prerequisites for the planning and design of teaching activities properly. The skills that were evidenced are interrelated and together externalize the relationship with knowledge, with the mastery of learning theories, with knowing how to think critically about them and apply them in teaching practice, in addition to knowing how to use resources that facilitate communication and interaction with students that help plan classes that are more attractive to students and able to facilitate their learning and increase their interest in the subject.

4.3.2 Frequency Matrix

The results obtained in the Factorial Loads Matrix (Table 6) indicate that Factor 1 has higher weights in variables 2, 18, 17 and 22. This factor presented a Cronbach's Alpha of 0.788. Factor 2 includes the variables: 3, 5, 20 and 19, with a

Cronbach's Alpha of 0.810. Factor 3 encompasses the variables: 15, 16 and 10, with a Cronbach's Alpha of 0.703. Factor 4 comprises a group of five variables: 14, 13, 1, 11 and 12, with a Cronbach's alpha of 0.609. Factor 5 brings together the variables: 7, 9, 8 and 21, with a Cronbach's Alpha of 0.656. Factor 6 includes only two variables: 6 and 4, with a Cronbach's Alpha of 0.610. Thus, the Cronbach's alpha reliability tests of the factors were higher than the lower acceptability limit (0.6), which is considered satisfactory according to Hair et al. (2019).

In view of the factors resulting from the factor analysis, the Frequency of Teaching Competences Mobilization Matrix by undergraduate professors in Accounting in Rio Grande do Sul was elaborated. Table 6 presents this matrix, indicating the factor resulting from the statistical analysis, followed by a description created for each factor, the question number in the data collection instrument, the question itself and the indication of the teaching competence to which it belongs, according to Vendruscolo (2015).

Table 6
Frequency of Teaching Competences Mobilization Matrix by Undergraduate Accounting Sciences Teachers in Rio Grande do Sul (Brazil)

Factor	Factor name	Cronbach's Alpha	Question	Questions which are part of the factor	Competence
1	Teaching process	0,788	2	I design teaching activities considering learning theories from a pedagogical perspective	Pedagogical
			18	I apply, in the classroom, knowledge of teaching and learning theories	Pedagogical
			17	I exercise pedagogical mediation and advise students	Didactics
			22	I promote improvements in the teaching-learning process	Reflection
2	Information technologies	0,810	3	Preparation of teaching material to support course activities using information and communication technologies (ICT)	Technological
			5	I explore new technological learning environments	Technological
			20	I keep myself technologically up to date	Technological
			19	I apply new technologies in the teaching and learning process	Technological
3	Student involvement and development	0,703	15	I encourage students' critical thinking	Reflection
			16	Encourage and challenge students to search for new knowledge	Didactics
			10	I inform and involve students in my classes	Communication
4	Communication with the student	0,609	14	I am ready to meet the demands of the students	Communication
			13	I support the students in cognitive tasks	Didactics
			1	I plan and organize teaching activities based on how I think knowledge happens	Pedagogical
			11	I communicate clearly and objectively, making myself easily understood	Communication

Factor	Factor name	Cronbach's Alpha	Question	Questions which are part of the factor	Competence
			12	I use different communication strategies in class (dialogue, conversation, interlocution, writing)	Communication
5	Contents - reflection and relationship	0,656	7	I link the contents taught in class with those of other subjects in the course and/or other areas of knowledge	Technique
			9	I reflect with students on the contents taught in the classroom and on global aspects of science and society	Reflection
			8	I relate the contents taught in class with knowledge built in teaching practice and professional practice	Technique
			21	I reflect on my teaching practice before, during or after the action	Reflection
6	Technique	0,610	6	I apply the contents of the subject(s) I teach with sufficient technical knowledge	Technique
			4	I follow changes that involve the technical knowledge of the disciplines I teach	Technique

Source: Prepared by the authors.

The factorial analysis of frequency did not result in the same factors as the factorial analysis of effort, because the difficulty or ease in certain component of competence is associated with the degree of knowledge or lack of knowledge regarding its performance; however, the frequency with which a certain element of competence is practiced does not depend on the technical domain of that element.

Factor 1 – Teaching process – explains 12.15% of the total variability and arises from four questions related to the teaching process and teaching activities. The question with the highest factor loading is 2 (0.846): "I design teaching activities considering learning theories from a pedagogical perspective". The factor indicates that the teacher knows the learning theories and is willing to apply them in teaching.

Factor 2 – Information technologies – explains 11.57% of the total variability and arises from four issues related to the use of new technologies in the teaching process, to keep up-to-date in relation to them. The question with the highest factor loading is 3 (0.796): "I prepare teaching material to support course activities using information and communication technologies (ICT)". The factor indicates that the teacher applies modern learning techniques that go beyond the obsolete classroom to arouse students' interest and keep them connected to the learning process.

Factor 3 – Student Engagement and Development – explains 10.21% of the total variability and stems from three questions related to student engagement and development. The question with the highest factor loading is 15 (0.767): "I encourage students' critical thinking". The factor indicates that the teacher really cares about the students and their learning and, above all, about the training of

professionals they will be in the future, seeking to instigate them to critical thinking and the search for new knowledge.

Factor 4 – Communication with the student – explains 9.42% of the total variability and stems from five questions related to communication and dialogue with students. The question with the highest factor loading is 14 (0.714): "I am ready to meet the demands of students". The factor indicates that the teacher shapes the way he communicates and interact with students planning the teaching activity as a way to reach the optimum point of learning. It shows that the teacher is concerned with learning and, above all, with understanding the content and the way knowledge is acquired.

Factor 5 – Contents – reflection and relationship – explains 8.98% of the total variability and arises from four questions related to the reflection of contents and teaching practice and the relationship of contents with another knowledge. The question with the highest factor loading is 7 (0.695): "I relate the contents taught in class with those of other subjects in the course and/or other areas of knowledge". The factor indicates that the teacher trains students to be professionals - in the practice of the profession all disciplines interact both with each other and with external factors - and encourage multidisciplinarity.

Factor 6 – Technique – explains 7.72% of the total variability and arises from two issues related to the technical mastery of the contents taught and updating in relation to them. The question with the highest factor loading is 6 (0.763): "I apply the contents of the discipline(s) I teach with sufficient technical expertise". The factor indicates that the teacher is constantly looking for technical and didactic improvement and demonstrates engagement with the subject of the discipline and with the educational process itself.

4.3.3 Analysis of the Effort Matrix and Frequency Perception Matrix

The effort and frequency perception matrices demonstrate the factors and their corresponding factor loadings using a standardized Varimax rotation. Such analysis makes it possible to identify the components (questions) that have the greatest power to influence the distribution of each factor and determine its content. These components are shown in the matrices (Tables 5 and 6), in descending order of exception in each factor.

The variance of Factors 1 and 2 explains 35.14% of the rotated variance of perceived effort and 23.72% of frequency. The greater the percentage of explained variance, the greater its importance for perceived effort. Although the factors contribute in different ways to the perception of effort and frequency in the mobilization of teaching skills, all the factors in the analysis proved to be relevant for this.

Factor analysis allowed us to identify the most relevant question in the composition of each factor. For the effort variables, it was found that Factors 1 and 2 are composed of elements of competences of a technical, communication and didactic and reflective nature, while Factors 3 and 4 are composed of elements of competences of a technological and pedagogical nature. In other words, the profile of the sample reveals that these teachers know how to be teachers and mediate the teaching and learning process and have mastery and communication of specific content. However, knowing information technology to

improve the teaching process and mastering learning theories, knowing how to think critically about them and apply them in teaching practice occupy limited space in the context experienced by teachers. This corroborates with the literature (Slosmki et al., 2009; Araujo, 2017; Silva & Bruni 2017; Vendruscolo 2017; Alves & D'Souza ,2018; Hillen et al. 2018; Lima & Araujo 2019; Farias et al. 2020; Araújo et al. 2021), indicating that competences such as pedagogical and technological are still considered less developed among professors, in contrast to technical, communication, didactic and reflective competences, which are considered more developed.

Regarding the frequency variables, in Factor 1, the issue that was most relevant is related to pedagogical competence, and in Factor 2, they are related to technological competence. This means that, in the respondents' conception, the effort to mobilize teaching skills is greater in relation to didactic, communication and technical skills and lesser for technological and pedagogical skills. On the other hand, the analysis of the frequencies of mobilization of teaching skills revealed that, in the respondents' conception, pedagogical and technological skills are more frequently mobilized than reflection, communication and technical skills.

The result of the factor analysis reveals that the mobilization of teaching skills by undergraduate accounting professors in RS (Brazil) occurs through combinations of teaching skills elements. The research findings also indicate that the competences most frequently demanded by professors are also those that require greater efforts for their mobilization. Although there is a greater frequency of mobilization of pedagogical and technological skills, there is a greater effort in the operationalization of didactic, communication and technical skills, results that suggest that, despite the search for improvement and development of teaching skills, the problems related to them they remain current and need improvement.

5 CONCLUDING REMARKS

This research aimed to analyze the degree of effort and frequency of mobilization of teaching skills by the perception of undergraduate professors in Accounting in Rio Grande do Sul, Brazil. The research results indicate that skills such as pedagogical and technological are still considered less developed among teachers, in contrast to technical, communication, didactic and reflective skills, which are considered more developed among teachers, corroborating by Nossa (1999), Laffin (2005), Andere and Araújo (2008), Slomski, et al. (2013), Marshall et al. (2010), Miranda et al. (2012), Vendruscolo and Behar (2014), Vendruscolo (2017), and Lima and Araújo (2020) findings.

The analysis reveals teachers who mediate the teaching and learning process, who have technical domain and who are easily able to communicate the specific content; on the other hand, it presents teachers with difficulties in mastering, rethinking and applying knowledge of information technology and teaching-learning theories in practice. Additionally, the longer the teaching time, the easier it is for the Accounting Sciences teacher to conceive teaching activities, use technical and technological knowledge, and, more often, be willing to shape their form of communication, to seek technical and didactic improvement and working on issues related to the teaching process and activities.

The research findings indicate that the competences most frequently demanded by professors are also those that require greater efforts for their mobilization. The analysis of the perceived effort revealed that, on average, 65% of the teachers had moderate or high difficulties to mobilize their teaching skills. Pedagogical and didactic competences were considered to have a high degree of mobilization effort, as well as reflective and technological competences.

On the other hand, the professors thought they had more facilities in terms of technical (three questions from four), communication (three from five), reflection (one from three) and technological (one from four) skills. Although there is a greater mobilization frequency of pedagogical and technological skills, there is a greater effort to operationalize didactic, communication and technical skills. The results suggest that, despite the search for improvement and development of teaching skills over the last 20 years, the problems related to teaching skills remain current and need improvement.

The analyzes showed that, on average, the Accounting professors who took the discipline of Methodology in Higher Education in postgraduate studies found it easier to apply learning theories and information technology knowledge and to think critically about and apply them in teaching practice than those teachers who did not attend the discipline. However, those professors who did not attend the postgraduate course in higher education methodology and who did not participate in technical training showed more facilities to deal with issues related to knowing how to be a teacher and mediating the teaching and learning process. Such results may be associated with the development of teaching skills through the reflection on their teaching practice, as suggested by Marshall et al. (2010), Lapini (2012), Engel et al. (2015), Miranda et al. (2017) and Araújo et al. (2021), as well as that the improvement of training at a *stricto sensu* level contributes to a more critical teacher training. The findings also raise additional questions about the cognitive processes involving the development of teaching skills and the mobilization and articulation of knowledge, skills, and attitudes to resolve situations arising in the teaching-learning process, as highlighted by Vendruscolo (2015).

As verified in previous studies and confirmed by the results of this research, teacher training is aimed at building theoretical and specific knowledge in the accounting area, while didactic-pedagogical training is being relegated to a lower level. The studies point out, and the research confirms, the relevance of individual efforts to develop teaching skills and a greater commitment to continuing education, especially about the development of didactic and pedagogical skills, as well as in relation to reflective and technological skills.

Although part of the professors has received some type of training considered to be pedagogical, the number of professors who have taken courses in Higher Education methodology and the number of professors who have sought this type of improvement in programs offered by the institution or in courses leads us to question the training of accounting masters and doctors in the country. The lack of specific preparation for the exercise of teaching associated with the difficulties of a didactic-pedagogical, reflective and technological nature leads to debate and deepening of studies in graduate programs on this subject capable of resulting in effective improvements in teacher education.

Such results, based on the teachers' perception, show that it's time to rethink the training for teaching in the accounting area. Studying teaching practices and teacher training considering a context of intense social changes and as incipience accounting research line is an essential challenge to improve the teaching-learning process. Therefore, it is urgent to bring up discussions about the issues that permeate this process, as well as the search for improvement alternatives in each teaching training space.

Based on the results of the research, we suggest to the HEIs and regulatory to encourage more effective continuing education programs that allow teachers moments of reflection on their pedagogical practice, contemplate a theoretical basis, learning and teaching methodologies, spaces for interaction with other teachers, such as workshops, lectures, courses to assist them in the training process and in preparing them to work in the classroom, contributing to changes in the practices of these teachers. We suggest to the Postgraduate courses an improvement in training at a *stricto sensu* level. It would be able to contribute to the critical training of teachers, which could be instigated through disciplines such as teaching internship and teaching methodology, tutoring programs, incentive to a didactic-pedagogical training and awareness of the importance of the individual efforts to make it more effective. We suggest to the professional representation bodies, initiatives to promote the formation of research groups that can bring up discussions about the reality faced in classrooms, submitting them to collective reflection through forums, discussion spaces and events to talk about teaching and exchange of ideas between teachers.

In summary, the research presented, in a pioneering way, demographic aspects of the teachers of the Accounting Undergraduate in Rio Grande do Sul (Brazil), contributing with empirical data to the development of research on teaching training and enabling the identification of training needs, contributing to the improvement of Accounting teacher training and adding value to what is effectively delivered to students as a result of the application of teaching skills. The study also contributes to Accounting students by highlighting the efforts of their teachers to develop their teaching skills. The research provides subsidies for the professional bodies in the accounting area to implement systematic continuing education programs that address the pedagogical needs of professors of undergraduate Accounting courses. Such contributions have theoretical and practical attributes to respond to society's concerns and the continuous search for the improvement of Brazilian higher education, and more specifically, for the Accounting Sciences.

Are research limitations: disregard of other agents that are part of the teaching process, analyze only the teacher's perspective and the zone of the data collection - only at Rio Grande do Sul. As it was not possible to know the number of teachers existing in the researched region, was used non-probabilistic sampling, so the survey results cannot be statistically generalized to the entire population. Another point considered limiting and indicative of some bias for the research is that the analysis is based only on the perception of the professors, which may be related to a certain degree of subjectivity of the respondent, in addition to the individual characteristics of each one.

It is suggested, for future research, the expansion of the study to the national level, the in-depth investigation of pedagogical and technological competences within the scope of teaching practice, which are still considered less developed

among teachers, and the proposition of a comparative analysis of the performance of students whose training was given by teachers with pedagogical qualifications and by teachers without pedagogical qualifications.

REFERENCES

Alves, F. S. L, & D'Souza, M. F. (2018). Formação didático-pedagógica: análise das competências docentes no curso de Ciências Contábeis. *Anais do Congresso USP de Iniciação Científica em Contabilidade*, São Paulo, SP, Brasil, 15.

Andere, M. A., & Araújo, A. M. P. (2008). Aspectos da formação do professor de ensino superior de Ciências Contábeis: uma análise dos programas de pós-graduação. *Revista de Contabilidade e Finanças, 19(*48), 91-102. https://doi.org/10.1590/S1519-70772008000300008

Araujo, A. M. P. de. (2017). Formação do professor de Contabilidade: uma proposta pedagógica. *Revista de Estudios e Investigación en Psicología y Educación*, 6, 49-54. https://doi.org/10.17979/reipe.2017.0.06.2222

Araujo, A. M. P. de, & Mello, R. R. de. (2014). What Is the training of the Accounting professor in Brazil?. *Creative Education, 5,* 886-899. http://dx.doi.org/10.4236/ce.2014.511102

Araújo, T. S., Leal, E. A., & Lourenço, R. F. (2021). Expectativas e satisfação dos discentes sobre os saberes e competências requeridas dos docentes na área de Ciências Contábeis. *Revista Ambiente Contábil - UFRN, 13*(1), 324-342. https://doi.org/10.21680/2176-9036.2021v13n1ID20179

Araújo, T. S., Lima, F. D. C., Oliveira, A. C. L., & Miranda, G. J. (2015). Problemas percebidos no exercício da docência em Contabilidade. *Revista Contabilidade e Finanças,* 26(67), 93-105. https://doi.org/10.1590/1808-057x201512230

Araújo, T. S., Miranda, G. J., & Pereira, J. M. (2017). Satisfação dos professores de Contabilidade no Brasil. *Revista Contabilidade & Finanças*, *28*(74), 264-281. https://doi.org/10.1590/1808-057x201703420

Barbosa, R. S., Leal, E. A., & Nganga, C. S. N. (2019). Estratégias de ensino aplicadas na pós-graduação em Contabilidade. *Revista Educação e Cultura Contemporânea, 16*(45), 548-574. http://dx.doi.org/10.5935/2238-1279.20190094

Bolzan, G., Vendruscolo, M. I., Sallaberry, J. D., & Diehl, W. (2020). O ensino de Ciências Contábeis e o processo de convergência ao International Financial Reporting Standards. *Revista Ambiente Contábil, 12*(1). 130-151. https://doi.org/10.21680/2176-9036.2020v12n1ID18313

Colauto, R. D., & Beuren, I. M. (2018). Coleta análise e interpretação dos dados. In: Beuren, I. M. (org.) *Como elaborar trabalhos monográficos em*

Contabilidade. São Paulo: Atlas. pp. 117-144

Costa, S. R. S., Duqueviz, B. C., & Pedroza, R. L. S. (2015). Tecnologias digitais como instrumentos mediadores da aprendizagem dos nativos digitais. *Revista Quadrimestral da Associação Brasileira de Psicologia Escolar e Educacional, 19*(3), 603-610. https://doi.org/10.1590/2175-3539/2015/0193912

Del Mundo, G. V., & Refozar, R. F. G. (2013). The accounting teachers of Batangas: their profiles competencies and problems. *International Scientific Research Journal, 5*(1), 131-166.

Engel, C. I., Vendruscolo, M. I., & Bianchi, M. (2015). Formação docente do curso de Ciências Contábeis: um estudo da base pedagógica nos programas *stricto sensu*. *Anais do Congresso UFSC de Controladoria e Finanças*, Florianópolis, Brasil, 6.

Farias, R. S. (2016). *Percepção dos professores de contabilidade no Brasil no tocante a competências didático-pedagógicas para o exercício da docência*. (Dissertação de Mestrado), Universidade de São Paulo, Ribeirão Preto, SP, Brasil.

Farias, R. S. de, & Araujo, A. M. P. de. (2018). Teacher professional development: field of knowledge rise. *Creative Education*, 9, 658-674. DOI: 10.4236/ce.2018.95048

Farias, R. S. de, & Araújo, A. M. P. de. (2016). Percepção dos professores de contabilidade quanto aos espaços formativos para o ofício da docência no Brasil. *Revista de Contabilidade e Organizações*, *10*(28), 58-70. https://doi.org/10.11606/rco.v10i28.124789

Farias, R. S., Stanzani, L. M. L., Lima, J. P. R., & Araujo, A. M. P. de. (2020). Preparação para a docência universitária: um estudo dos espaços formativos. *BASE – Revista de Administração e Contabilidade da Unisinos, 17*(4), 606-633. https://doi.org/10.4013/base.2020.174.04

Field, A. (2009). *Descobrindo a estatística usando o SPSS*. (2a ed.). Porto Alegre: Artmed.

Frauches, P. F. (2015). *Docência no ensino superior: um perfil dos saberes que fundamentam a prática pedagógica de docentes que atuam em cursos de Ciências Contábeis*. (Dissertação de Mestrado), Fundação Escola de Comércio Álvares Penteado, São Paulo, SP, Brasil.

Giorgi, W. A. B. D., Pizolato, C. L., & Morettin, A. A. (2001). Competências e habilidades e o ensino superior de Contabilidade. *Revista Pensar Contábil, 4*(16), 9-12.

Gujarati, D. (2006). *Econometria Básica*. (4a ed.). Rio de Janeiro: Campus.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2019). *Análise multivariada de dados*. (6a ed.). Porto Alegre: Bookman.

Hillen, C., Laffin, M., & Ensslin, S. R. (2018). Proposições sobre formação de professores na área contábil. *Arquivos Analíticos de Políticas Educativas,* 26(106). http://dx.doi.org/10.14507/epaa.26.3060

Huberman, M. (2000). O ciclo de vida professional de professores. In: Nóvoa, A. (org) *Vida de professores*. Porto Editora.

Laffin, M. (2005). *De contador a professor: a trajetória da docência no ensino superior da Contabilidade*. Florianópolis: Imprensa Universitária.

Lapini, V. C. (2012). *Panorama da formação do professor em Ciências Contábeis pelos cursos strictu sensu no Brasil*. (Dissertação de Mestrado), Universidade de São Paulo, Ribeirão Preto, SP, Brasil.

Libâneo, J.C. (2008). *Organização e gestão da escola: teoria e prática*. (5a ed.). Goiânia: MF Livros.

Likert, R. (1975). *A organização humana*. São Paulo: Atlas.

Lima, F. D. C., Oliveira, A. C. L., Araújo, T. S., & Miranda, G. J. (2015). O choque com a realidade: dormi contador e acordei professor... *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación, 13*(1), 49-67.

Lima, J. P. R. de, & Araujo, A. M. P. de. (2019). Tornando-se professor: análise do processo de construção da identidade docente dos professores de contabilidade. *Advances in Scientific and Applied Accounting*, *1*(2), 59–80. https://doi.org/10.14392/ASAA.2019120204

Marshall, P. D., Dombrowski, R., Garner, M., & Smith, K. (2010). The Accounting education gap. *The CPA Journal*, *80*(6), 6-10.

Marshall, P. D., Smith, K., Dombrowski, R., & Garner, M. (2012). Accounting faculty perceptions of the influence of educational and work experiences on their performance as educators. *The Accounting Educators Journal, 22*, 73-91.

Masetto, M. T. (2012). *Competência pedagógica do professor universitário*. (2a ed.). São Paulo: Summus.

Miranda, G. J. (2010). Docência universitária: uma análise das disciplinas na área da formação pedagógica oferecidas pelos programas de pós-graduação *stricto sensu* em Ciências Contábeis. *Revista de Educação e Pesquisa em Contabilidade*, *4*(2), 81-98.

Miranda, G. J., Casa Nova S. P. C., & Cornacchione, J. E. B. (2012). Os Saberes dos professores-referência no ensino de Contabilidade. *Revista Contabilidade & Finanças, 23*(59), 142-153. https://doi.org/10.1590/S1519-70772012000200006

Miranda, G. J., Santos, L. A. A., Casa Nova, S. P. C., & Cornacchione Júnior, E. B. (2013). A Pesquisa em educação contábil: produção científica e preferências

de doutores no período de 2005 a 2009. *Revista Contabilidade & Finanças, 24*(61), 75-88. https://doi.org/10.1590/S1519-70772013000100008

Miranda, G. J., Carrazana, X. E. V, Pereira, J. M., Araujo, T. S., & Silva, T. L. G. B. (2017). Relación entre los problemas del proceso de enseñanza-aprendizaje de la carrera de Contabilidad y las fases del ciclo de vida de los docentes. *Ensino Em Re-Vista*, *24*(2), 408-430. http://dx.doi.org/10.14393ER-v24n2a2017-06

Nganga, C. S. N., Botinha, R. A., Miranda, G. J., & Leal, E. A. (2016). Mestres e doutores em Contabilidade no Brasil: uma análise dos componentes pedagógicos de sua formação inicial. R*evista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, *14*(1), 83-99. 10.15366/reice2016.14.1.005

Nossa, V. (1999). *O ensino da Contabilidade no Brasil: uma análise crítica da formação do corpo docente.* (Dissertação de Mestrado). Universidade de São Paulo, São Paulo, SP Brasil.

Perazo, A. N. C., Machado, D. G., Cruz, A. P. C., & Quintana, A. C. (2016). Perfil do docente de Ciências Contábeis: perspectiva de sua qualificação acadêmica, pedagógica e profissional. *Revista de Contabilidade e Controladoria, 8*(2), 49-65. https://doi.org/10.5380/rcc.v8i2.38481

Pereira, M. A. C. (2007). *Competências para o ensino e a pesquisa: um survey com docentes de engenharia química*. (Tese de Doutorado), Universidade de São Paulo, São Paulo, SP Brasil.

Silva, C. F., Ferreira, L. V., Leal, E. A., & Miranda, G. J. (2019). Formação docente na área contábil: contribuições da disciplina de metodologia do ensino oferecida na pós-graduação stricto sensu. *Sociedade, Contabilidade e Gestão*, *14*(3). https://doi.org/10.21446/scg_ufrj.v0i0.23062

Silva, U. B. da, & Bruni, A. L. (2017). O Que me ensina a ensinar? Um estudo sobre fatores explicativos das práticas pedagógicas no ensino de Contabilidade. *Revista de Educação e Pesquisa em Contabilidade (REPeC)*, *11*(2). https://doi.org/10.17524/repec.v11i2.1531

Slomski, V. G. (2007). Saberes e competências do professor universitário: contribuições para o estudo da prática pedagógica do professor de Ciências Contábeis do Brasil. *Revista de Contabilidade e Organizações*, *1*(1), 89-105. https://doi.org/10.11606/rco.v1i1.34699

Slomski, V. G. (2009). Saberes que fundamentam a prática pedagógica dos professores de Ciências Contábeis. *Revista Brasileira de Contabilidade*, *39*(180), 119-140.

Slomski, V.G., Anastácio, J.B., Araujo, A. M. P. de, Slomski, V., & Carvalho, R.F. (2020). Casos da prática educativa na aprendizagem da docência universitária. *Arquivos Analíticos de Políticas Educativas, 28*(33). https://doi.org/10.14507/epaa.28.5041

Slomski, V. G., & Martins, G. A. (2008). O conceito de professor investigador: os saberes e as competências necessárias à docência reflexiva na área contábil. *Revista Universo Contábil, 4*(4), 06-21.

Slomski, V. G., Lames, E. R., Megliorini, E., & Lames, L. C. J. (2013). Saberes da docência que fundamentam a prática pedagógica do professor que ministra a disciplina de gestão de custos em um curso de Ciências Contábeis. *Revista Universo Contábil,* 9(4), 71-89. https://doi.org/10.4270/ruc.2013431

Swain, M. R., & Stout, D. E. (2000). Survey evidence of teacher development based on AECC recommendations. *Journal of Accounting Education, 18*(2), 99-113. https://doi.org/10.1016/S0748-5751(00)00013-0

Tardif, M., & Raymond, D. (2000). Saberes, tempo e aprendizagem do trabalho no magistério. *Educação & Sociedade, 21*(73), 209-244. https://doi.org/10.1590/S0101-73302000000400013

Vasconcelos, A. F. (2009). *Professores em Ciências Contábeis: um estudo sobre as competências para o exercício da docência nos cursos presenciais no Nordeste brasileiro*. (Dissertação de Mestrado), Universidade Federal da Paraíba e Universidade Federal do Rio Grande do Norte, João Pessoa, PB, Brasil.

Vasconcelos, A. F., Cavalcante, P. R. N., & Monte, P. A. (2012). Fatores que influenciam as competências em docentes de Ciências Contábeis. *VEREDAS FAVIP – Revista eletrônica de Ciências, 5*(1), 86-101.

Vendruscolo, M. I. (2015). *Modelo pedagógico para o desenvolvimento de competências docentes em Contabilidade por educação a distância*. (Tese de Doutorado), Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brasil.

Vendruscolo, M. I. (2017). Competências docentes: um estudo empírico com professores de cursos de graduação em Ciências Contábeis no Brasil. *Anais do Congresso ANPCONT*, Belo Horizonte, MG, Brasil, 10.

Vendruscolo, M. I., & Behar, P. A. (2014). Educação e pesquisa em Contabilidade: estado da arte do Congresso USP de Controladoria e Contabilidade do período de 2004 a 2012. *Ambiente Contábil,* 6(1), 83-98.

Verdum, P. (2013). Prática Pedagógica: o que é? O que envolve? *Revista Educação por Escrito*, *4*(1), 91-105.

Zanella, P., Antonelli, R. A., & Bortoluzzi, S. C. (2017). Avaliação das competências docentes: análise no curso de Ciências Contábeis da UTFPR. *Revista de Educação e Pesquisa em Contabilidade (REPeC)*, *11*(2). https://doi.org/10.17524/repec.v11i2.1417

AUTHORS' CONTRIBUTIONS

Contributions	Giovana Bolzan	Maria Ivanice Vendruscolo
1. Idealization and conception of the research subject and theme	✓	
2. Definition of the research problem	✓	✓
3. Development of Theoretical Platform	✓	
4. Design of the research methodological approach	✓	
5. Data collection	✓	
6. Analyses and interpretations of collected data	✓	
7. Research conclusions	✓	
8. Critical review of the manuscript	✓	✓
9. Final writing of the manuscript, according to the rules established by the Journal.	✓	✓
10. Research supervision		✓