

# An Application Of The Delphi Technique To The Mapping Of Accounting Teaching Qualification Dimensions

## Abstract

The assessment of teaching qualifications has been a recurring theme in the literature without controversies. This study aims to discover and analyze how a group of accounting experts perceive the dimensions of the teaching qualifications that are considered essential in contemporary higher accounting education by means of the Delphi technique. Therefore, a commission of 21 Brazilian and international experts was constituted, with a heterogeneous educational background, representative of the teaching qualifications that were to be analyzed. Three rounds were needed to reach a consensus. The results indicated that the academic qualification included factors related to degree, research and publication; professional qualification involved factors related to professional experience and credentials; and the pedagogical qualification comprises factors related to institutional support, teaching experience and permanent education. In addition, the complete commission valued the academic education most highly, reaching 46.7% of the investigated experts.

**Key words:** Teaching. Accounting. Teaching qualifications. Delphi technique.

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## 1. Introduction

Many studies have focused on teachers' background to work in higher education nowadays (Frecka & Reckers, 2010; Marshall, Dombrowski, Garner & Smith, 2010; Miranda, 2010; Almeida & Pimenta, 2009; Andere & Araújo, 2008; Slomski, 2009; Shulman, 2005; 1986) and various aspects of this background have been discussed. In accounting, for example, the following are focused on: the relevance of preparation for research practice, notably through a *stricto sensu* degree; the importance of contact with professional practices; and the relevance of didactical-pedagogical knowledge.

In general, higher education teachers do not receive systemized pedagogical preparation for teaching practice. In the teaching diploma programs, the curricula address subjects related to didactical-pedagogical contents. Bachelor students, however, have access to these contents when they choose to take subjects related to the methodological of higher education, in *stricto sensu* graduate programs, or when they seek further qualification in the educational area. According to Pierre, Wilson, Ravenscroft & Rebele (2009, p. 126), the educational literature is an extremely rich source of knowledge accounting teachers can consult and use. For the sake of the development of Accounting programs at different levels, however, it is important for the knowledge construction to consider the particularities of the accounting area, as the epistemological base leads to different pedagogical practices among the knowledge areas.

Outside Brazil, the fiercest discussions are related to academic and professional qualification. According to many authors, the two qualifications are essential for effective Accounting teachers (Njoku, Heijden & Inanga, 2010; Heijden, 2003). Nevertheless, it is acknowledged that requiring the two qualifications from the same teachers makes their education more complicated and that it is ideal for an institution's teaching staff to include teachers who hold both qualifications, so that the students can have contact with the two types of education in their undergraduate program.

This discussion is more mature abroad but, in the Brazilian context, it is still incipient, as verified by: (a) the small amount of research and researchers investigating the theme; (b) the number of teachers able to reach the academic qualification levels established abroad, such as the criteria of The Association to Advance Collegiate Schools of Business (AACSB) for example. In Brazil, slightly more than 200 people hold a Ph.D. in accounting, against 7,109 in the United States in 2008 (Bouillon & Ravenscroft, 2010); and (c) the limited advance, in professional terms, of the Professional Qualification Examination of the Federal Accounting Council (CFC), which can strengthen the professional qualification but is still very recent. In the United States, on the other hand, the Certified Public Accountant (CPA) has been consolidated besides different specific credentials, such as CMA (*Certified Management Accountant*), *Chartered Financial Analyst* (CFA) and others, which are complemented by relevant experiences regarding the theme addressed in the classroom.

In that context, it is extremely complex to establish the necessary teaching qualifications for Accounting teachers. In that sense, the following question is raised: How does an expert group in accounting perceive the dimensions of teaching qualifications that are considered essential in contemporary higher education in accounting?

To achieve this goal, the Brazilian and international literature about teaching qualification in higher education and Accounting teachers' qualification in Brazil and abroad were reviewed to disclose what qualifications and their respective factors comprise the education of accounting teachers. Next, this information was evaluated by a commission of Brazilian and international experts for confirmation through the Delphi technique. Besides the teaching performance assessment factors validated by the experts, differences between the sub-commissions (Brazilian accountants, international accountants, other areas – Business Administration and Education) in the expert panel were explored. An interesting complementary analysis contrasted the testimonies of foreign and Brazilian experts, which can provide support for the analysis of the different development stages of the knowledge area in Brazil and abroad.

## 2. Theoretical Platform

Various studies have attempted to map what teacher attributes stand out positively in the classroom among students and teachers (Volpato, 2009; Marshall *et al.*, 2010; Slomski & Martins, 2008; Catapan, Colauto & Sillas, 2011; Miranda, Casa Nova & Cornacchione, 2012). Volpato (2009, p. 335) developed a study to understand the pedagogical representations and practices in courses that traditionally prepare autonomous professionals, such as Medicine, Law and Engineering. According to the author, “[...] it was clear that there is agreement that teachers with ‘good didactics’ are capable of ‘relating theory and practice’, and able to bring concrete facts from the professional area to be considered and analyzed in the classroom” as, according to the students, “teachers who are professionally active are in better conditions to present and socialize the course contents, because they are capable of establishing more concrete relations based on their experiences, making them more easily understood.” (Volpato, 2009, p. 339). This means that, according to the investigated students, a teacher with “good didactics” have professional experience and are able to bring this experience into the classroom.

In the same sense, Marshall *et al.* (2010) developed a study about Accounting teaching, involving 95 American accounting teachers (Ph.D.’s holding a CPA). The authors found that, according to the respondents, there is no qualification that replaces the experience in teaching and accounting practice when one intends to become an effective Accounting teacher. According to Slomski and Martins (2008), in Brazil, in view of the limitations in terms of professional education for the teaching profession, it is the professional experience itself, in the classroom and in college, as well as the peers’ experience, that have structured and given meaning to the pedagogical practice of Accounting teachers.

Catapan *et al.* (2011), based on Lowman’s Two-Dimensional Model of Effective Teaching (2007), developed a study to analyze the main practices and attributes of successful Accounting teachers in the classroom from the perspective of 234 students at public and private universities in Curitiba (PR) and Joinville (SC). The findings indicate the mastery of contents, clear information transmission and arousing interest in the class as the reasons for good teaching performance. As regards the “intellectual stimulus” dimension, the adjectives that define a good teacher are “prepared”, “clear” and “organized”. In the “interpersonal relationship” dimension, the adjectives were “respectful” and “interested”.

Miranda *et al.* (2012) also undertook a study to assess the predominant knowledge in teachers perceived as reference professors among undergraduate Accounting students from a Brazilian public university. The main findings included: (a) the subjects responsible for the most significant learning experiences during the course were perceived as baseline subjects with greater practical application; and (b) the main reasons for choosing the reference teachers were didactics or teaching method and the teachers’ personal attitudes and qualities. The three knowledge aspects deriving from these choices were, in this order, didactical knowledge, content mastery and experience-based knowledge.

The above studies and others mentioned further ahead indicate the need for at least three types of qualifications for Accounting teachers: (a) academic qualification; (b) professional qualification; and (c) pedagogical qualification, as presented in Figure 1.



**Figure 1.** Dimensions of Teaching Qualification in Accounting

Source: the authors

The Academic Qualification (Qac) refers to the teachers' preparation for research on the themes they teach. Different authors highlight the importance of degrees and research in Accounting teaching, in Brazil and abroad (Njoku *et al.*, 2010; Ruff, Thibodeau & Bedard, 2009; Pierre *et al.*, 2009; Libâneo, 2009; Cunnigham, 2008; Annisette & Kirkham, 2007; Kachelmeier, 2002). In other countries, this type of qualification is normally found when the teachers hold a Ph.D. and has done relevant research on the themes they teach.

The Professional Qualification (Qpr) indicates the teacher's link with current accounting practices in the professional sphere, that is, the teacher has one foot in the academy and the other in the market (Marshall *et al.*, 2010; Geary, Kutcher & Porco, 2010; Njoku *et al.*, 2010; Harmer, 2009; Volpato, 2009; Miley, 2009; Trapnell, Mero, Williams & Krull Jr., 2009; Annisette & Kirkham, 2007). In the international context, this qualification is formalized through the master's degree and a professional qualification, such as CPA, CMA, CFA and others, complemented by relevant experiences on the theme taught in the classes.

Finally, the Pedagogical Qualification (Qpe) represents the systemized preparation for teaching practice and is related to the didactical-pedagogical domain, Accounting teaching methods and support policies and programs for the continuing education of the teaching staff organized by the Higher Education Institution (HEI) or the Accounting program. In general, the absence of this qualification in higher education has been the target of fierce criticism by educational and accounting experts (Frecka & Recka, 2010; Marshall *et al.*, 2010; Miranda, 2010; Almeida & Pimenta, 2009; Andere & Araújo, 2008; Slomski, 2009; Shulman, 2005; 1986). On the other hand, references in the area have emphasized that pedagogical qualification is a means and that "if you have a why, you arrange a how" (Machado, 2011).

Based on the theoretical framework constructed through the literature review, the research moves on to the result phase of the investigation by the expert panel by means of the Delphi technique.

### 3. Method

This study is classified as an exploratory and quantitative research. In that sense, initially, the researchers attempted to identify the factors constituting the Accounting teachers' qualifications in the theoretical platform. Next, these were categorized into academic qualification, professional qualification and pedagogical qualification. Finally, these factors were confirmed using the Delphi technique, a scientific technique that permits the analysis of qualitative data to reach a consensus among experts on the research theme (Grisham, 2009; Giovinazzo, 2001). In that sense, Fink, Kosecoff, Chassin, & Brook (1984) affirm that the main objective of the formal consensus methods is to define agreement levels in controversial terms.

The objective with the application of the Delphi technique was to confirm whether the teaching qualification factors surveyed in the literature were considered relevant in the experts' opinion, so as to map, based on the verified facts, the teaching qualification in the undergraduate Accounting programs in Brazil.

### 3.1 The Delphi Technique

The Delphi technique was developed at the end of the 1940's, based on the work by Olaf Helmer and Norman Dalko, researchers from the Rand Corporation, for military purposes. As from the 1960's, this technique became widespread. Czinkota & Ronkainen (2005) indicate that the Delphi technique has gained substantial acceptance in various knowledge areas. These authors report that this technique has been used as a research tool in Librarianship, Information Science, medical disciplines, multinational studies, previews of economic conditions, among others. In addition, according to the authors, the method produces useful results that are accepted and supported by most of the scientific community. Grisham (2009) affirms that, in a research by Academic Search Premier, in May 2008, 476 papers were identified that used the Delphi technique, which indicates that it is a very well accepted practice in research.

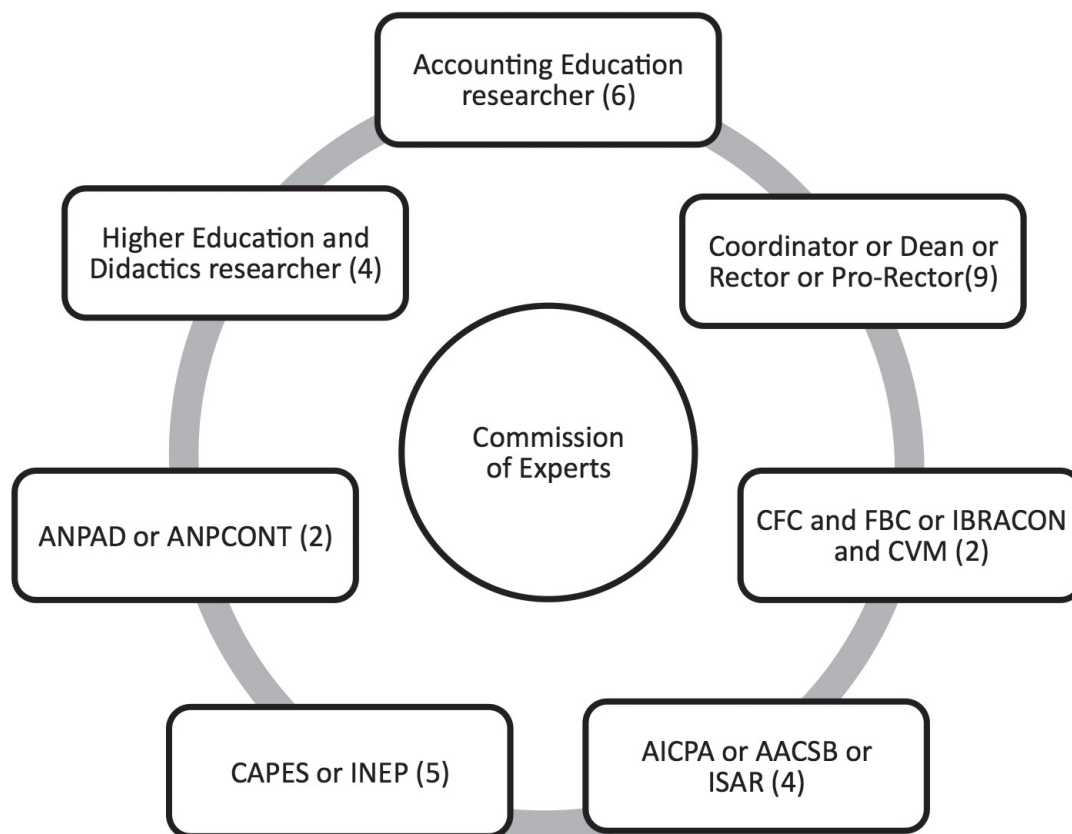
According to Grisham (2009), the method requires the participation of experts in the area, who individually respond to the proposed questions and submit the results to a central coordinator, who processes the answers, observes trends and discrepancies and their justifications. The results are then returned to the respondents. When they receive the results, the participants can change their opinions and resubmit them to the coordinator, in a continuous process, until a consensus is established.

In that sense, Vianna (1989) considers that the number of rounds depends on the stability, that is, when no new contributions to the study come up. In this research, to establish the end of the round, the calculation of the variance coefficient in the answers was used (quotient between standard deviation and mean), associated with a decision rule: (a) quotient below 15%: low dispersion; (b) quotient above 15% and below 30%: medium dispersion; (c) quotient superior to 30%: high dispersion (Martins & Theóphilo, 2007). Three rounds were needed to reach stability, that is, a dispersion coefficient inferior to 30% for most of the variables.

### 3.2 Selection of Experts

It is important to select an expert panel that is balanced in terms of impartiality and interest in the theme (Grisham, 2009). In this study, the term "expert" means a person with prominent knowledge, besides experience and a formal degree, affiliated with academic and professional institutions at an interface with Accounting teaching (credible associations, public entities that regulate higher and graduate education, representatives from international entities related to Accounting teaching, representatives from professional entities and Education, Business Administration and Accounting teachers).

The number of recommended experts diverges a lot among the authors, ranging from 10 to 60 members (Vianna, 1989; Giovinazzo, 2001; Grisham, 2009). In this study, 43 experts were invited (26 accepted the invitation) and 21 completed all rounds (48.8% of the invitees). The range of professionals is high, as recommended in the literature. In terms of degree, most experts hold a post-doctoral degree and teach in Master's and Ph.D. programs; 14 have an educational background in Accounting, four in Education and three in Business Administration. In terms of nationality, four are Americans, one is Scottish and 16 are Brazilians. Figure 2 summarizes other characteristics related to academic and professional filiations of the commission that were relevant for this study.



**Figure 2.** Main Attributes of Expert Commission Members

It is important to highlight that the commission includes experts holding the three qualifications investigated in this study, that is: academic qualification, professional qualification and pedagogical qualification. This choice was made in view of the research objectives, that is, the relations between teaching qualifications and student performance were identified. The link with the academy, the degree and past research in accounting and education are considered important attributes to enable the experts to reflect in a solid manner on the component factors of each of the three qualifications. Nevertheless, the commission is strongly linked with the accounting profession, as four members are or have been active in Brazilian and foreign professional councils (*Conselho Federal de Contabilidade* [CFC], *Fundação Brasileira de Contabilidade* [FBC], *Instituto Brasileiro de Auditores Independentes* [Ibracon], *Comissão de Valores Mobiliários* [CVM] and *Instituto Americano de Contadores Públicos Certificados* [AICPA]), a representative of the Association to Advance Collegiate Schools of Business [AACSB] (program accreditation institution) and a representative of the *Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting* [ISAR] (eminently technical institution). In addition, most accountant and business administrators on the commission are or have been active in the professional market, as accountants, consultants and managers. Finally, the commission also includes educational experts for the sake of the appropriate analysis of the factors related to the pedagogical qualification. Therefore, in the composition of the expert commission, people were considered who are qualified to analyze the concepts of student performance, academic qualification, professional qualification and pedagogical qualification.

## 4. Results

The process was developed in three successive rounds, starting on 5/26/2011, when the first round was sent, and ending on 6/15/2011, when the final response to the third round was received.

Before the start of the first and second rounds, two pretests were undertaken with the electronic version of the questionnaire, involving four teachers in each, including two Accountancy teachers with a Master's degree (one of them pursuing a Ph.D. degree), and two teachers in the educational area, also holding a Master's degree (one of them pursuing a Ph.D. degree). The consideration of the suggestions made during the pretest resulted in the final version of the instrument.

### 4.1 First Delphi Round

During the first round, the experts received an electronic questionnaire with a list of 22 factors related to the academic, professional and pedagogical qualifications, defined based on the literature. Next, the experts were asked to express their agreement or disagreement with the presented factors and the characteristics of the qualifications. The acceptance percentage of the factors by the group is expressed in Table 1.

Table 1  
Acceptance Percentage of Factors – First Delphi Round

Qualification	Factors	% of Agreement
Academic	Doctoral degree	81%
	Master's degree	90%
	Specialist degree	43%
	Serving as a reviewer for scientific journals	48%
	Working at higher education institutions on a full-time base	38%
	Having published in international scientific journals or with <i>Qualis/CAPES</i> = A1, A2, B1 or B2	62%
	Having published in other scientific journals	86%
	Participation in research associations or entities (Examples: ANPAD, ANPCONT, CAPES).	71%
Professional	Experience in the accounting profession (at least two years)	86%
	Community service projects involving the academy and the community	95%
	Applied research projects (academy/market)	95%
	Participation in professional associations or regulatory entities (Examples: Accounting Boards, Securities Commission, Central Bank, Technical Pronouncements Committee)	48%
	Consulting, advisory services and technical reviewers.	81%
Pedagogical	<i>Stricto sensu</i> pedagogical course in Education (M.Sc. or Ph.D.)	43%
	<i>Lato sensu</i> pedagogical course in Education (specialization)	57%
	Extension program for pedagogical training	81%
	Research projects related to teaching	67%
	Teaching experience (at least two years).	76%
	Offering of preparation programs for teaching Pedagogical Support Center (CAP), Pedagogical Support Group (GAP), Pedagogical Support Nucleus (NAP), among others, by the HEI.	95%
	Support from HEI to teachers' participation in research projects and scientific events.	95%
	Support from HEI to teachers' participation in educational processes ( <i>stricto sensu</i> courses) at other HEI (in Brazil and abroad).	71%
Promotion of scientific events related to teaching	81%	

Source: Research Data

In addition, the experts were asked for suggestions on other factors in each of the qualifications analyzed, according to their own experience and knowledge. The expert commission gave various suggestions that can contribute to the qualification of Accounting teachers in each of the three qualifications under analysis. These suggestions were accepted and submitted to the commission's analysis as from the second round. As regards the academic qualification, the following factors were suggested:

- Reputation of the Master's or Ph.D. program: refers to the program's prestige, such as the CAPES concept in Brazil.
- The quality of the dissertation or thesis: refers to the performance achieved by the defended dissertation or thesis, like the score, concept or mention gained in the defense of the study.
- Research groups: considers the teacher's involvement in research groups that truly produce new knowledge.
- Regular participation in scientific events in the area: refers to the teacher's participation in congresses, seminars and scientific meetings, during which current themes on the accounting reality are discussed.

In addition, the foreign participants gave comments, emphasizing the quality of the program, the teaching staff and the dissertation or thesis, which is justifiable as graduate education is much more developed in the Anglo-Saxon context than in Brazil. The Brazilian researchers, in turn, emphasize the teacher's involvement in the research context (participation in research groups and scientific events).

When discussing the investigated factors, the experts highlighted professional qualification as an important dimension in Accounting teachers' education. According to them,

- in the Applied Social Sciences, practice is essential for the teachers, as the research "laboratory" is often the company.
- Accounting is an Applied Social Science. It is both important and necessary for Accounting teachers to have professional experience. This experience, in combination with the qualifications identified in the literature, contributes to enrich teaching.

Besides the arguments highlighted above, the experts also discussed the professional dimension, with four new factors, which are presented next.

- Experience in management area: refers to the teacher's experience as a decision maker, accounting information user in corporate management.
- Brazilian professional certificates: professional qualification (CRC register) and/or certificate of independent auditor (CVM), among others.
- International professional certificates, such as: CPA, CMA and ACCA (Association of Chartered Certified Accountants).
- Regular participation in professional accounting events: participation in events that allow the teacher to remain in tune with current professional practices.

The experts also put considerable emphasis on the pedagogical qualification. At different times, the group's concern with this dimension was observed, according to the following:

- Learning to teach is an important part of a teacher's responsibilities. These skills need constant improvement and updates to apply effective teaching strategies in accordance with the different learning styles.



- The teaching profession often tends to accommodate the teacher in the position of ‘expert’ in a certain discipline, making them understand that this, in combination with the reproduction of his specific education, is sufficient to teach. Within a pedagogical education, higher education teachers need to know the knowledge and competences required for college teaching.
- [...] courses can and should be developed on how to prepare and elaborate presentations, select and use teaching strategies, among others. It should be clarified, however, that these efforts cannot come only from the teacher. More than 90% of the Accountancy programs in Brazil are offered at night at private HEI and, often, the conditions are unfavorable or even adverse.

The specialists also suggest five new factors regarding pedagogical qualification, which are presented next.

- Regularly participate in pedagogical events
- Promote workshops among teachers to discuss teaching
- Encourage and support the production of didactical books in Accounting.
- Involvement of the teaching staff in the construction of the course’s political-pedagogical project.
- Regular assessment of the teaching staff by students and/or peers and/or institutional.

Besides the factors related to the three qualifications investigated in this study, other factors related to teaching qualification were identified in the experts’ discourse. These factors are related to the teacher training the Master’s or Ph.D. program offers, through didactical-pedagogical subjects of teacher training. According to the experts,

- Accounting teachers can and should develop expertise to teach in the classroom. The *stricto sensu* programs should attach more value to this aspect, despite CAPES’ current rules;
- Each *stricto sensu* program should offer at least one specific subject (Didactics of Accounting Teaching, Accounting Teaching Methodology or another name); in addition, programs like the Teaching Improvement Program [PAE] at the University of São Paulo, or even supervised training at the M.Sc. and/or Ph.D. students’ HEI of origin.

The above testimonies highlight important possibilities in the teachers’ initial background, as highlighted in the literature (Miranda, 2010; Masetto, 2003). The experts also consider that the assessment should take into account the institution’s reality instead of assessing each member of the institutional teaching staff.

## 4.2 Second Delphi Round

To hold the second Delphi round, the acceptability level of the first-round factors for the expert commission was considered (Cunha, 2007). The factors were separated in two groups: a) factors with low acceptability – which obtained less than 50% of agreement by the experts; and b) factors with medium and high acceptability – which obtained 50% or more of acceptability by the expert committee.

Thus, five factors were excluded from the list, as presented in Table 1. The first, related to the academic qualification, was “specialist degree”, which obtained 43% of agreement. The second and third, both related to academic qualification, were “serving as a reviewer for scientific journals” and “working at higher education institutions on a full-time base”, which obtained 48% and 38% of agreement, respectively. Concerning the latter, the high level of disagreement is considered surprising, as full-time dedication exists exactly for teachers to have time to research. This, in turn, takes the form of academic qualification. This aspect indicates a contradiction, as the commission devaluates full-time dedication but, at the same time, grants 95% (the highest percentage) of agreement to the factor “support to teachers’ participation in research projects and scientific events”, part of the pedagogical qualification.

The fourth factor excluded, part of the professional qualification “Participation in professional associations or regulatory entities (for example: Accounting Councils, Securities Commission, Central Bank, Technical Pronouncements Commission)”, obtained 48% of agreement among the experts. The fifth factor excluded “*stricto sensu* pedagogical course in Education (M.Sc. or Ph.D.)”, which is part of the pedagogical qualification, obtained 43% of agreement in the expert commission, and was the most polemical factor among the members. The following opinions were expressed in this respect:

- I believe that, once you choose the teaching profession, it is not enough to hold a specific degree, whether at Master’s or Doctoral level, but you need a degree in EDUCATION.
- The Accounting teacher needs to take classes in Pedagogics, but not necessarily become an expert in the area. At least not as a rule.
- The Master’s and Doctoral programs in Education should be as valued as programs in the specific area. Nevertheless, it cannot be compulsory and should not involve all teachers. But a good course needs some professionals in the field of higher education, linked to the educational area.

A new list of 30 factors, including the 17 factors that remained from the first round and 13 new factors the experts suggested, was presented to the commission in the second round. The experts were asked to assess the level of importance of each factor for the respective teaching qualification, scoring them between zero (least important) and ten (most important).

### 4.3 Third Delphi Round

At the end of the third round, it was verified that the answers reached the stability recommended in the literature, as only one factor obtained a variation coefficient of more than 30%. Therefore, the Delphi rounds were closed off. The results are displayed in Table 2.

Table 2  
Level of Importance of the Factors

Factor	Score	%	Classification
Regular assessment of teaching staff by students and/or peers and/or institutional.	189	90%	1°
Involvement of teaching staff in the construction of the pedagogical course project.	187	89%	2°
Ph.D. degree.	186	89%	3°
Professional accounting experience (at least two years).	184	88%	4°
Promotion of workshops among teachers for discussions about teaching.	184	88%	4°
Experience as teacher (at least two years).	182	87%	5°
Regular participation in scientific accounting events.	179	85%	6°
Community service program for pedagogical training (e.g. college pedagogics, courses on new educational technologies).	178	85%	7°
Support for teachers’ participation in research projects and scientific events.	178	85%	7°
Participation in cohesive and active research groups.	178	85%	7°
Master’s degree.	174	83%	8°
Promotion of scientific events that relate to teaching.	173	82%	9°
Applied research projects (academy/market).	173	82%	9°
Support for teachers’ participation in educational processes ( <i>stricto sensu</i> courses) at other HEI (in Brazil and abroad).	172	82%	10°
<i>Lato sensu</i> pedagogical training course (specialization) in education.	171	81%	11°

Factor	Score	%	Classifi-cation
Experience in management as a decision maker (accounting information user).	170	81%	12°
Quality of the defended dissertation or thesis (concept, score or mention gained).	170	81%	12°
Offering of preparation programs for teaching Pedagogical Support Center (CAP), Pedagogical Support Group (GAP), Pedagogical Support Nucleus (NAP), among others.	170	81%	12°
Having published in international scientific journals or with <i>Qualis</i> /CAPES ranking = A1, A2, B1 or B2.	169	80%	13°
Having published in other scientific journals.	166	79%	14°
Regular participation in professional accounting events.	164	78%	15°
Consulting, advice and technical reviewers.	163	78%	16°
The reputation of the Master's/Ph.D. program and its teaching staff (e.g. concept of the program in CAPES ranking).	160	76%	17°
Participation in research associations or entities (Examples: ANPAD, ANPCONT, CAPES).	159	76%	18°
Research projects related to teaching.	154	73%	19°
Stimulus and support for the production of didactical books in Accounting.	153	73%	20°
Hold Brazilian professional certificates, such as: professional register (CRC register) and/or independent auditor certificate (CVM).	151	72%	21°
Regular participation in pedagogical events.	151	72%	21°
Community service projects involving the academy and the community.	150	71%	22°
Hold international professional certificates, such as: Certified Public Accountants (CPA), Certified Management Accountant (CMA) and Association of Chartered Certified Accountants (ACCA).	131	62%	23°

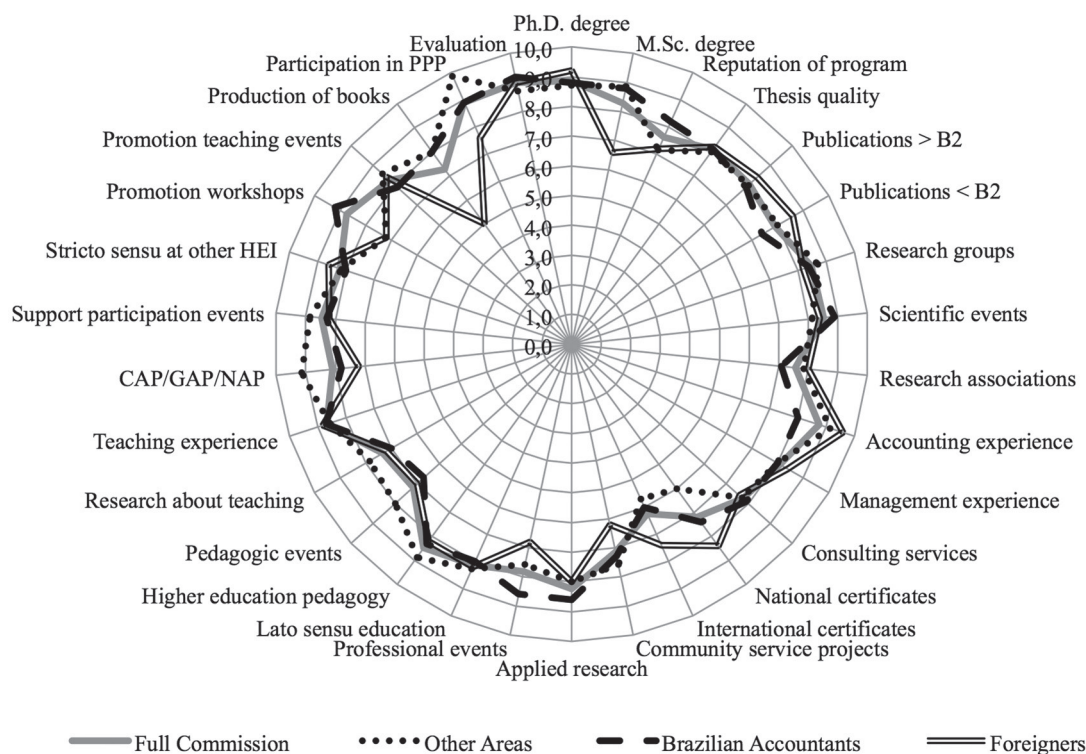
Source: Research Data

The factor with the best assessment was “Regular evaluation of teaching staff by students and/or peers and/or institutional”, with a score of 189 points. Nevertheless, some disagreements occurred in the understanding about the assessment form. Four commission members suggested this factor in the first round. Some of them mentioned assessment by peers, others by students and a third group did not mention the type of assessment. In the third round, considerations about the factor “assessment” continued to appear. The factor with the second best assessment “Involvement of the teaching staff in the construction of the political-pedagogical course project” was another suggestion of the expert commission and, similar to the first, was part of the pedagogical qualification, with a score of 187 points. The third highest score (186) was attributed to “Ph.D. degree”, related to the academic qualification.

The analysis of the variation coefficients shows that the factors with the smallest variations and, therefore, the greatest consensus, were “Regular assessment of the teaching staff by students and/or peers and/or institutional”, with a variation coefficient = 9.1% and “Consulting, advice and technical reviewers”, with a variation coefficient = 11.9%. The sole factor with a high variation was “Holding international professional certificates, such as: CPA, CMA and ACCA”, with variation coefficient = 32%. This factor also obtained the lowest score among the experts (131 points).

Again, it is important to emphasize that, when inviting the members to participate in the commission, due care was taken to consider a wide range of teachers, researchers and professionals in order to avoid biased results. As the research objective is to analyze the components of the academic, professional and pedagogical qualifications of the teachers active in Brazilian Accounting programs, the answers for the following subgroups were analyzed: full commission (21 experts), Brazilian accountants (9 experts), foreign accountants (5 professionals) and professionals in Education and Business Administration (7 professionals), as established in the literature (Cunha, 2007; Giovinazzo, 2001).

Based on these analyses, it can be concluded that, when considering the variables related to the academic qualification (clockwise analysis of Figure 1), the foreign experts were the group that least values the Master's degree, even if they value the Doctoral degree similarly to the other groups. This fact can picture the much higher number of professionals with *stricto sensu* degrees in those countries, making Master's degrees much less valued than in Brazil. In addition, abroad, in some countries, it is usual for the Master's degree to be considered much more focused on professional than academic preparation. In many countries, a Master's degree is not even necessary to start a Doctoral program.



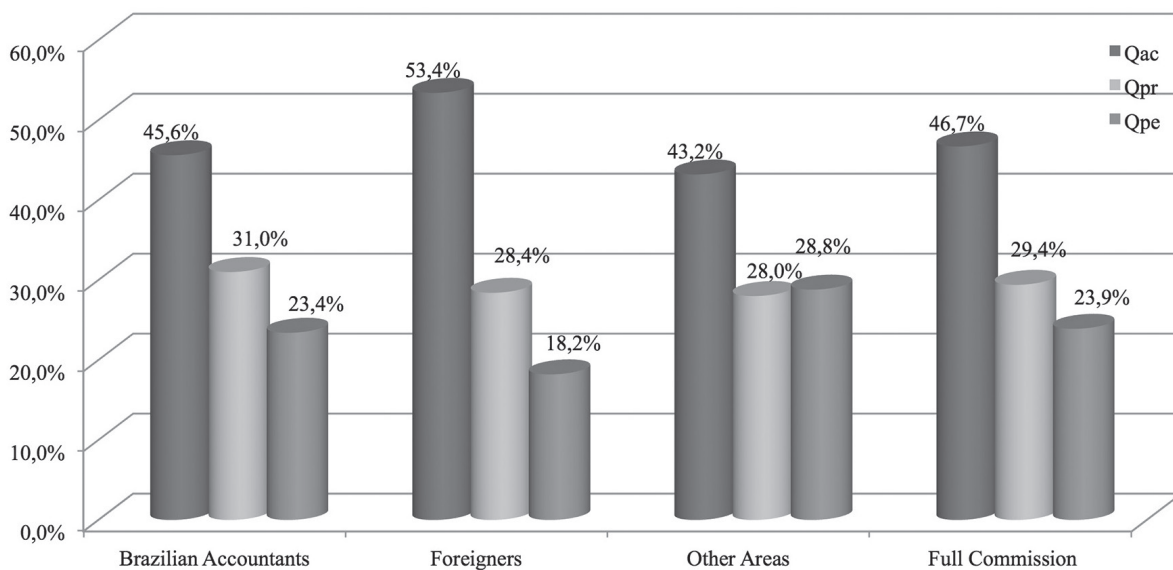
**Figure 3.** Comparative Scores (%) among Sub-commissions and Complete Commission

Source: Research Data

The analysis of the component variables of professional qualification also shows that the foreign specialists scored the professional experience higher than the others. In addition, the professionals from other areas (Education and Administration) attribute less value to the national and international certificates, while the foreign professionals are the group that least values the teachers' participation in community service projects and professional accounting events, and who attribute the highest value to Brazilian professional credentials. This different valuation is justified by the importance of professional credentials in those countries. Regarding the CPA credential, for example, the candidate should have at least 150 hours of formal education, besides a higher education degree and the CPA exam, "[...] which is very difficult" (Lopes & Martins, 2005, p. 105).

The pedagogical qualification revealed the greatest differences. As expected, on average, the experts from other areas (namely Education) scored the variables in this group higher, mainly the variable "participation in the institution's political-pedagogical project", with an average 98.6% for this group. The foreign accountants scored the following items lower: pedagogic events; research about teaching; participation in pedagogical training courses; promotion of workshops; and production of didactical books.

In the second and third rounds, the experts were asked to score each of the qualifications according to their perceptions. Figure 4 displays the results for the full commission and the sub-commissions.



**Figure 4.** Weights attributed by the experts to the teaching qualifications

Source: Research Data

According to the expert commission, the academic qualification is considered the most important in Accounting teachers' education, with a mean score of 46.7%. This type of qualification is also the most valued among the foreign research participants. They believe that the academic qualification should represent more than half of the teaching qualifications needed (53.4%). This thinking is in line with the assessment mechanisms of the AACSB (2010c), which require at least 50% of academic qualification of the teaching staff in accounting courses for the purpose of accreditation.

The second type of teaching qualification in terms of relevance was "professional qualification", which obtained a mean score of 29.4% in the expert commission. The Brazilian accountants are the specialists that most value the professional qualification, with a mean score of 31%. On the other hand, the Administration and Education experts least valued this type of qualification. These results do not differ much from the history presented in the AACSB evaluations (2010b), whose professional qualification percentages between 2006 and 2009 figure around 32%, against 61% for academic qualification.

The pedagogical qualification obtained the lowest percentages (23.9%) in the full commission. The experts from other areas, mainly Education, value the pedagogical qualification most highly (28.8%). On the other hand, the foreigners least valued this type of qualification. And, in fact, there is no international parameter for comparison with the pedagogical qualification, as the academic qualification also includes the pedagogical qualification factors in the AACSB criteria (2010).

## 5. Final Considerations

This study departs from the problem related to the definition of the Accounting teaching qualification dimensions in Brazil and their respective factors. After surveying three essential qualifications (academic, professional and pedagogic) in the literature, the study aimed to confirm the component factors of each of the respective qualifications through a commission of Brazilian and foreign experts, using the Delphi technique.

Initially, 22 factors were presented to the commission, five of which were excluded after the first round, revealing that the expert commission was opposed to some aspects in the consulted literature. In other words, for the commission, the fact that the teacher "holds a specialist degree", "serves as a reviewer for scientific journals" or "works at higher education institutions on a full-time base" does not qualify him/her from the academic viewpoint. Similarly, the commission understood that "Participation in professional

or regulatory entities” (Examples: Accounting Councils, Securities Commission, Central Bank, Technical Pronouncements Committee)” is not relevant for the Accounting teachers’ professional qualification. The results also revealed that, for the commission, teachers qualified from the pedagogical viewpoint do not need to possess “*stricto sensu* pedagogical training in Education”.

The experts’ participation was effective in all rounds, adding 13 new factors and several comments in the course of the process. Besides the factors suggested in the literature, the expert committee believes that the academic qualification should also consider: the Master’s or Doctoral program’s reputation; the quality of the thesis or dissertation; the participation in research groups; and the participation in scientific events in the area. As regards the professional qualification, the commission clarified that the suggestions identified in the literature are not sufficient, finding it necessary for professionally qualified teachers to attend to several other requisites: management experience; Brazilian professional certificates, such as professional accreditation (CRC register) and/or independent auditor certificate (CVM); international professional certificates, such as CPA, CMA and ACCA; and regular participation in professional accounting events. For the pedagogical qualification, the commission also added important factors. According to the commission members, this qualification should address the following factors: teachers’ regular participation in pedagogical events; institutional support for the promotion of workshops among the teachers to discuss teaching; encouragement and support for the development of books in Accounting Education; involvement of teaching staff in the construction of the course’s political-pedagogical project and regular assessment of the teaching staff by students and/or peers and/or institutional.

In the second and third rounds, none of the factors obtained less than 50% of acceptance in the commission. Hence, all 30 factors continued until the final application of the technique. Only one factor did not obtain a variation coefficient below 30%, that is, did not reach a consensus in the commission. Thus, in the third round, a consensus was reached in 97% of the factors. Although this is not a rule, as observed, the factors with the highest mean scores also obtained the lowest variation coefficients, while the factors with the lowest means generally obtained the highest variation coefficients.

As perceived, in general, the foreign experts value academic qualification higher (see Graph 2) than the others, mainly the Ph.D. degree and the participation in scientific accounting events. Brazilian accountants, then, value the professional qualification most highly. Administration or Education experts attribute the highest value to pedagogical qualification (according to Graph 1 and Graph 2), which may be due to their educational background. Therefore, academic education is the factor the full commission values most highly, scoring 46.7% among the experts.

The assessment mechanisms of institutions, teachers and students, in Brazil as well as in the international context (Brasil, 2008; Njoku *et al.*, 2010; Ruff *et al.*, 2009; Pierre *et al.*, 2009; Annisette & Kirkham, 2007; Kachelmeier, 2002), are strongly focused on the scientific production, which many experts have often criticized (Almeida & Pimenta, 2009; Cunha, 2006). The analysis of expert opinions (as well as the AACSB and CAPES), however, shows that it is exactly research (academic qualification) that is valued most highly, which necessarily involves the degree.

That is so because the changes that affect the profession, such as the adoption of international standards and technological advances, modify accounting teaching. The professional activities prioritize technical application and knowledge reproduction, without considering the elements the very near future has in store for the graduates: critical reasoning, communication skills, judgment-making skills, etc. The “machine” increasingly absorbs the structured or semistructured (technical) problems, in function of the technological advances. In other words, teachers with exclusively technical qualifications, due to the actual nature of their activities, will certainly not be prepared to help the students, inside or outside the classroom, conquer the competences that will be required in this “new market”. Therefore, what can make the HEI modify the scenario in the long term is exactly the investment in academic qualification.

These results suggest the need for policies to support *stricto sensu* graduate programs in Accounting in Brazil, as it is through a degree that academic qualification can be achieved. They also indicate the need for the teachers themselves to gain awareness about the importance of teaching qualification in their teacher training.

As a broad and complex issue, further research is needed. The following is suggested: (a) investigate the relation among the academic, professional and pedagogic qualifications and the results of the Federal Accounting Council's Qualification Exam (when published) and (b) investigate the three qualifications, studied in this research, in Accounting programs, using the teachers themselves as the research subjects, with a view to proposing a scale to measure the teaching qualification in Accounting programs.

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