Characteristics of Graduate Accounting Programs: An Analysis of Universities in English-Speaking Countries

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Abstract
The literature indicates there is a shortage of professors of accounting. For some researchers this lack is related to the high price paid to obtain an advanced degree in this area. According to the American Accounting Association (AAA), graduate programs need to be more attractive, less stressful and less expensive for students. Therefore, the objective of this study is to map the characteristics of the selection process, the courses offered and the requirements to obtain a master’s degree in accounting from universities located in English-speaking. This study can be classified as descriptive, with a theoretical-conceptual nature and a qualitative approach. We rely on secondary sources and apply inductive logic. The main results are that in the United States, 71% of the programs require candidates to have knowledge of accounting, finance, economics, taxes, statistics and mathematics; 75% of Australian universities...
require a minimum score on the TOEFL for foreign students, 20% have a minimum GPA and 10% require taking the GMAT; and no Canadian university requires a letter of recommendation. Regarding the purpose of the courses, 88% of the institutions that offer master programs in accounting focus on improved professional qualification of accountants. In Australia, 30% of the programs last 18 months, while in Canada this figure is 66% and in New Zealand, 50% of the programs last at least two years. With respect to the graduation requirements, 82% of the universities require between 4 and 9 mandatory disciplines. In conclusion, the master programs in the United States and United Kingdom are relatively more demanding with respect to the degree requirements than in the other countries investigated.

**Keywords:** Master in accounting. Graduate education. Requirements for graduation. English-speaking countries.

1. INTRODUCTION

There is a serious and growing shortage of professors in the area of accounting (BEYER et al., 2010). What is discouraging accounting professionals from pursuing teaching careers? Are there overly limited research opportunities? Does it cost too much to obtain the advanced degree needed to teach in relation to the return? Does such a career require exclusive dedication? Are there too many requirements to obtain an advanced degree? The reasons are surely diverse, mainly considering that most graduate programs are paid (at least for foreign students) and some programs are more demanding than others.

The growing shortage of teachers indicated by Beyer et al. (2010) can be related to the “sacrifice” required to complete a graduate program. In this respect, other authors suggest a reason is the substantial commitment of time (BEARD; ELFRINK, 1990; CHEWING; DEBERG, 1991) and the opportunity costs (CARCELLO; HERMANSON; TURNER, 1994).

According to Plumlee et al. (2006), an ad hoc committee of the American Accounting Association (AAA) was formed five years before to assess the lack of accounting professors and to formulate recommendations to help resolve the problem. In this sense, Beyer et al. (2010) adds that the committee carried out extensive studies of the disciplines of the accounting departments and surveys among the directors of doctoral programs in accounting and the students of these programs.

In Brazil, there have been several studies of graduate programs in the areas of accounting and business administration. Among these are works analyzing the approach to control in the dissertations of graduate accounting students (BEUREN; BOGONI; FERNANDES, 2008), regional questions regarding a master in business administration program recommended by the Ministry of Education’s Office to Improve University Personnel (CAPES) (GIL; OLIVA; GASPAR, 2008) and the perception of faculty of graduate accounting courses at American universities regarding the scientific research paradigm in accounting (MURCIA et al., 2008).

Other studies also can be mentioned, such as those identifying the profile of 66 dissertations written by graduate accounting students at the University of São Paulo (USP) and Blumenau Regional University (FURB) (SANTOS; KLANN; RAUSCH, 2010); the motivations, expectations and influences related to obtaining a master’s in accounting from the multi-institutional and inter-regional graduate accounting program offered by UnB/UFPB/UFRPE/UFRN (MARTINS; MONTE, 2010); and aspects of graduate accounting programs regarding institutional pressures to obtain high rankings from CAPES (CRUBELLATE et al., 2008).

One of the factors contributing to the shortage of qualified accounting professors in Brazil is that the master degree programs in this area are relatively recent. In this respect, Miranda, Azevedo and Martins (2010, p. 1-2) state that “in 2000, there were only six master programs and one doctoral program in accounting accredited by CAPES. At the end of 2009, there were eighteen master and four doctoral programs, increases of 200% and 300%, respectively.” Reina (2009, p. 27) makes the same observation: “the master programs in accounting are relatively new; more than 63.0% of them only started to operate as of 2004.”

In contrast, in the United States, approximately 82 universities offer master and/or doctoral programs focused on accounting (HASSELBACK, 2001). These programs have a much longer tradition of
awarding advanced degrees in accounting than in Brazil. In this context, in the present study we seek to answer the following question: What are the characteristics of the master programs in accounting at universities in English-speaking countries? Our aim is to map the characteristics of the admission process, the disciplines offered and the requirements for obtaining a master’s degree in accounting from these universities.

Gaining entrance to a graduate accounting program can be a huge challenge because the admission requirements are very rigorous (BEYER et al., 2010). Hence, this study can offer important insights to improve the quality, structure and attractiveness of graduate accounting programs in Brazil, to help strengthen existing ones and those that will emerge in the future.

The present study is thus important by identifying the characteristics of the master in accounting programs of 112 universities located in five English-speaking countries (United States, United Kingdom, Australia, New Zealand and Canada), tracing out the requirements for entrance to and graduation from those institutions. This information can be of use for restructuring and improving existing programs and can also serve as a benchmark for future programs.

This study is divided into five sections including this introduction. In the second section we summarize the theoretical platform, while in the third we present the classification, sample and methods used for analysis and in the fourth section we present and analyze the results. The fifth section concludes with some recommendations for future studies.

2. THEORETICAL FRAMEWORK

2.1 Graduate study and evaluation of programs

According to the study of the ad hoc committee of the American Accounting Association (AAA) about the lack of accounting professors, one of the recommendations in the international context was the creation of an informative website by the AAA aimed at potential graduate students. Another recommendation was the need to make programs more attractive by reducing the costs to students, including personal expenses, and the need to make the courses more attractive and viable (BEYER et al., 2010). Indeed, the “cost of the course” was a relevant point observed among all the accounting master programs of the 112 universities studied in the five countries.

Graduate programs in accounting started in Brazil at the end of the 1950s, more precisely on May 12, 1958 with the issuance of Decree 32,307, signed by the governor of the state of São Paulo, Jânio Quadros (MARTINS and MONTE, p. 19, 2010). However, the first program offering master and doctoral degrees in accounting only effectively started to operate in the 1970s (BEUREN et al., 2009). According to Igarashi et al. (2008, p. 122), “the courses in Brazil started in 1961, aimed at training liberal professionals, with a market orientation, dissociated from research.”

The first doctoral program in accounting in the United States was created by the University of Illinois at Urbana-Champaign in 1938, reflecting a new vision of accounting teaching (BEDFORD, 1997). In contrast to Brazil, more than 6,000 doctorates in accounting had been awarded by American universities up to 2005 (MURCIA; BORBA; AMBRÓSIO, 2007; HASSELBACK, 2010). However, the number of doctors of accounting trained in that country should not be surprising, since approximately 82 universities in the country offer doctoral or master programs in accountancy or doctorates in business administration with focus on accounting (HASSELBACK, 2001). In Brazil there are currently 19 master in accounting programs and 4 doctoral programs, according to Miranda, Azevedo and Martins (2010).

The literature does not contain many works evaluating graduate accounting programs. In the international context, according to Stammerjohan and Hall (2002) in “Evaluation of doctoral programs in accounting: An examination of placement”, the majority of studies to assess the quality of doctoral programs only evaluate and classify the main programs. They cite, for example, the works of Andrews and McKenzie (1978), Bazley and Nikolai (1975), Bublitz and Kee (1984), Dichev (1999), Hagerman and Hagerman (1989), Jacobs et al. (1986) and Mittermaier (1991) (STAMMERJOHAN; HALL, 2002).
accounting programs in the United States based on aspects such as academic production, placement of graduates at top-tier universities and quality of the accounting department, among others. In the authors’ view, this information should help students choose the best programs.

Another study that deserves mention is that of Baldwin, Brown and Trinkle (2010), entitled “Accounting doctoral programs: A multidimensional description”, seeking to evaluate and describe doctoral programs in accounting according to a wide range of characteristics. According to the authors, the results of the study can be particularly useful for doctoral applicants, program directors, accreditation bodies and search committees seeking to differentiate or benchmark programs (BALDWIN; BROWN; TRINKLE, 2010).

In the international context, mention can be made of the study by Trapnell et al. (2009) entitled “The accounting doctoral shortage: Time for a new model”, which although focused on evaluating programs, is the first to list various structural challenges to overcome the shortage of accounting professors holding doctoral degrees. They make six recommendations in this respect, including creation of a new research program aimed at supporting doctoral students with the participation of inter-institutional faculty teams (TRAPNELL et al., 2009).

The shortage of accounting professors is even greater in Brazil, as reflected in the study by Igarashi et al. (2008), with the title “Uma estruturação de um modelo híbrido de avaliação para o programa de pós-graduação em Contabilidade da Universidade Federal de Santa Catarina: uma proposta de autogerenciamento” (“A structure for a hybrid evaluation model for the graduate accounting program at Federal University of Santa Catarina: A proposal for self-management”). The aim of the study was to discuss the concerns inherent to the program and to associate these to questions of program evaluation by CAPES.

2.2 Similar studies in the Brazilian and international context

In the Brazilian context, studies of graduate accounting programs are relatively recent. In this respect, Murcia, Borba and Ambrósio (2007) mention that the pioneering study was that of Germano (1988), who examined the doctoral theses in accounting at the University of São Paulo (USP) up to 1988. Later, Marion (1992) analyzed various aspects of accounting teaching in the United States.

Murcia, Borba and Ramos (2007) mention other studies: Riccio, Carastan and Sakata (1999), who examined the characteristics of the academic production of dissertations and theses between 1962 and 1999, and the study of Neri (2004) regarding the relative earnings of different university professions, including those holding master and doctoral degrees in accounting. Also in the Brazilian context, there have been studies focusing only on doctoral programs in accounting, others only on master programs and some on both levels.

In the first case are the works of Magalhães (2006), who identified, characterized and analyzed the sources of information used in 48 theses presented from 2002 to 2005 in the doctoral accounting program of FEA/USP; Cunha and Cornachione Junior (2008), who identified and analyzed the evaluations and perceptions of 150 graduates of the FEA/USP doctoral program in accounting according to their development and social responsibilities; Miranda, Azevedo and Martins (2010), who verified whether doctoral theses in accounting really responded to a research problem, by empirically testing variables; Cunha, Cornachione Junior and Martins (2008), who sought evidence of the degree of influence of doctoral theses in accounting defended in the country on the production of new knowledge; and Beuren et al. (2009), who analyzed the research networks of graduates of the doctoral accounting program of FEA/USP by means of a study involving 158 graduates.

In the second group of works, mention can be made of the studies of Beuren, Bogoni and Fernandes (2008), analyzing the approach to control in the dissertation written in graduate accounting programs in Brazil; Igarashi et al. (2008), on the quality of teachers according to the evaluation bias of the graduate accounting program of Santa Catarina Federal University by means of a hybrid-multicriterion model; Santos, Klann and Rausch (2010), regarding the profile of the dissertations defended in the graduate accounting programs of USP and FURB, by means of content analysis of 66 dissertations; and Martins and Monte (2010), investigating the motivations, expectations and influences related to obtaining a master’s degree in accounting from the multi-institutional and interregional graduate program of UnB/UFPB/UFPE/UFRN.
Finally, the third group of works includes those of Martins (1997), analyzing a sample of 126 dissertations and theses defended at FEA/USP, EAESP/FGV and PUC/SP between 1980 and 1993 regarding epistemological issues; Soares, Ebsen and Pfitscher (2010), describing the academic profile of 314 Brazilian accounting researchers at the doctoral, postdoctoral and habilitation levels; Nascimento and Beuren (2010), examining the formation of social networks for scientific production of graduate accounting programs in Brazil, among 199 tenured professors of 21 master and doctoral programs in accounting; and Leite Filho and Martins (2006), diagnosing and characterizing the aspects of the relationship between faculty advisors and their students and the influence on theses and dissertations in the graduate accounting programs of universities in the city of São Paulo, among others, as summarized in Chart 1.

<table>
<thead>
<tr>
<th>Authors/Source</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frohlich (1994) <em>Revista Análise Econômica</em></td>
<td>Examined the graduate training of economists in the United States by identifying the profile of the graduates of doctoral programs.</td>
</tr>
<tr>
<td>Martins (1997) <em>Revista de Administração (RAUSP)</em></td>
<td>Analyzed 126 dissertations and theses successfully defended by students of the graduate programs in accounting of FEA/USP, EAESP/FGV and PUC/SP regarding epistemological issues.</td>
</tr>
<tr>
<td>Leite Filho and Martins (2006) <em>Revista de Administração de Empresas (RAE)</em></td>
<td>Studied the relations between faculty advisors and graduate students and the influences on the production of theses and dissertations in accounting.</td>
</tr>
<tr>
<td>Fragoso, Ribeiro Filho and Libonati (2006) <em>Revista Universo Contábil</em></td>
<td>Evaluated whether persons holding doctorates in accounting with interdisciplinary résumés engage in more research than those holding doctorates without such broad experience.</td>
</tr>
<tr>
<td>Murcia, Borba and Ambrósio (2007) <em>Revista de Contabilidade e Finanças</em></td>
<td>Studied the main characteristics of 28 graduate accounting programs in the United States.</td>
</tr>
<tr>
<td>Cunha and Cornachione Junior (2008) <em>XXXII Encontro da ANPAD</em></td>
<td>Identified and analyzed the evaluations and perceptions of 150 holders of doctorates in accounting from FEA/USP on the influence of the degrees on their development and social responsibilities.</td>
</tr>
<tr>
<td>Cunha, Martins and Cornachione Junior (2008) <em>Revista de Informação Contábil (RIC)</em></td>
<td>Sought to establish by means of the Delphi method the factors of the development of individuals and society that are potentially influenced by a doctoral course.</td>
</tr>
<tr>
<td>Flores, Hoelgebaum and Silveira (2008) <em>Revista Gestão de Negócios</em></td>
<td>Characterized 16 master and doctoral programs in administration in Brazil with concentration in the area of accounting and disciplines involving entrepreneurship regarding their curricular structure.</td>
</tr>
<tr>
<td>Souza, Murcia and Borba (2008) <em>XI SemeAD</em></td>
<td>Analyzed the profile and academic productivity of professor of finance of Brazilian doctoral programs in administration.</td>
</tr>
<tr>
<td>Souza, Murcia and Borba (2009) <em>XXXIII Encontro da ANPAD</em></td>
<td>Identified the perception of the faculty members of Brazilian and American doctoral programs in finance by sending 710 questionnaires.</td>
</tr>
<tr>
<td>Souza (2009) <em>XXXIII Encontro da ANPAD</em></td>
<td>Analyzed the curriculum characteristics of 11 Brazilian and 24 American doctoral programs in finance listed in the ranking of CAPES and of U.S. News and World Report, respectively.</td>
</tr>
<tr>
<td>Beuren et al. (2009) <em>Revista de Contabilidade, Gestão e Governança</em></td>
<td>Analyzed the research networks of 158 graduates of the doctoral program in accounting of FEA/USP.</td>
</tr>
<tr>
<td>Borba et al. (2009) <em>Revista Repec</em></td>
<td>Identified the perception of 150 professors at 92 American universities regarding the model of scientific research in accounting.</td>
</tr>
</tbody>
</table>
The studies of the international context date back further than those of the Brazilian situation, since, for example, while the first doctoral program in accounting in the United States began in 1938 at the University of Illinois at Urbana-Champaign (BEDFORD, 1997), the first such programs in Brazil date from the 1970s (BEUREN et al., 2009), with the first program being offered by the University of São Paulo. The master in accounting programs in Brazil are even more recent, with the majority having begun after 2004 (REINA, 2009).

The international studies typically cover larger samples than Brazilian ones, which is understandable since there are only 19 master of accounting programs in Brazil versus 112 just among the 400 best universities in the world. In this respect, we can mention the studies of Crum (1974), who analyzed 63 graduate accounting programs; Stammerjohan and Hall (2002), who evaluated and ranked 80 graduate programs in accounting in the United States; and Everett, Klamm and Stoltzfus (2004), who summarized and analyzed the academic production of 87 graduate accounting programs.

Other studies that can be mentioned are those of Carcacello et al. (1994), who analyzed the costs of doctoral programs in accounting in the United States and the support offered by the universities to students (scholarships, teaching assistance, etc.); Beattie and Goodacre (2003), who analyzed the patterns of published research in the areas of accounting and finance in the United Kingdom; Doogar (2003), who analyzed the supply and demand for holders of doctoral degrees in accounting in the United States and suggested a model based on financial criteria; Stammerjohan, Seifert and Guidry (2009), who evaluated and classified 80 graduate accounting programs in the United States of institutions accredited by the Association to Advance Collegiate Schools of Business (AACSB) based on the initial placement of their graduates; and Beyer et al. (2010), who formulated a concise guide for current and potential doctoral students in accounting to help them in gaining greater awareness of pursuing a career teaching accounting. Chart 2 summarizes these and other studies.

<table>
<thead>
<tr>
<th>Authors/Source</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crum (1974) &lt;br/&gt; <em>Journal of Accountancy</em></td>
<td>Analyzed 63 doctoral programs in accounting through a survey with questions about the program, faculty and students.</td>
</tr>
<tr>
<td>Shipley and Engle (1982) &lt;br/&gt; <em>Management Accounting</em></td>
<td>Developed a theoretical work seeking to evidence the need for doctors in accounting in the United States.</td>
</tr>
<tr>
<td>Bell, Frecka and Solomon (1993) &lt;br/&gt; <em>Accounting Horizons</em></td>
<td>Conducted an empirical study of a sample of 473 professors at 31 American universities to test the relation between scientific production and teaching efficiency.</td>
</tr>
<tr>
<td>Carcacello et.al. (1994) &lt;br/&gt; <em>Accounting Education</em></td>
<td>Analyzed the costs of doctoral programs in accounting in the United States and the financial support (scholarships, teaching assistance, etc.) offered by universities to students.</td>
</tr>
</tbody>
</table>
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<tr>
<th>Authors/Source</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinstein and Hasselback (1998) <em>Journal of Accounting Education</em></td>
<td>Reviewed the literature on the scientific production of professors of accounting in the United States and established a model to evaluate their productivity.</td>
</tr>
<tr>
<td>Stammerjohan and Hall (2002) <em>Journal of Accounting Education</em></td>
<td>Evaluated and ranked 80 doctoral programs in accounting in the United States based on academic production and placement of the graduates.</td>
</tr>
<tr>
<td>Beattie and Goodacre (2003) <em>The British Accounting Review</em></td>
<td>Studied the patterns of publication of the academic community in the United Kingdom in the area of accounting/finance and found that only 16% had published works in the 60 main accounting journals.</td>
</tr>
<tr>
<td>Doogar (2003) <em>Advances in Accounting Education</em></td>
<td>Analyzed the supply and demand for doctors of accounting in the United States and suggested a model taking into account financial criteria in the evaluation of teachers.</td>
</tr>
<tr>
<td>Heck (2007) <em>Social Science Research Network (SSRN)</em></td>
<td>Classified 91 American doctoral programs in finance based on the academic production of the teachers and students and the research done by the department heads.</td>
</tr>
<tr>
<td>Stammerjohan, Seifert and Guidry (2009) <em>Advances in Accounting Education: Teaching Innovations</em></td>
<td>Evaluated and classified 80 doctoral programs in accounting in the United States based on the initial placement of their graduates in institutions accredited by the Association to Advance Collegiate Schools of Business (AACSB) and the status of the institutions awarding the degrees.</td>
</tr>
<tr>
<td>Beyer et al. (2010) <em>Accounting Education</em></td>
<td>Prepared a concise career guide for current and potential doctoral students in accounting to help them gain better awareness of the aspects of pursuing a career as accounting professors.</td>
</tr>
<tr>
<td>Baldwin, Brown and Trinkle (2010) <em>Advances in Accounting Education</em></td>
<td>Described doctoral programs in accounting according to a wide range of characteristics.</td>
</tr>
</tbody>
</table>

**Chart 2: Similar studies in the international context**

Source: Adapted from Murcia, Borba and Ambrósio (2007) and Souza, Murcia and Borba (2009).

In the literature review of graduate accounting programs, we found many more studies of doctoral than master degree programs. Perhaps this relative lack of investigation at the master level is due to the focus of these programs in the international context, because the majority are related to professional qualification rather than research, unlike in Brazil, where the emphasis is more on training for careers as teachers and researchers than on professional advancement.

This study differs from previous works in that it presents the characteristics necessary for admission to and graduation from graduate programs in accounting at universities in English-speaking countries.

### 3. RESEARCH METHOD

#### 3.1 Methodological Classification

This study is classified as descriptive, for investigating the characteristics of graduate accounting programs (RICHARDSON, 1999). According to Andrade (2002, cited in Beuren, 2003, p. 80), descriptive studies are concerned with “... observing the facts and recording, classifying and interpreting them ....”

The study has an inductive logic by investigating some characteristics of master in accounting programs.
by means of observing the reality of each course individually. According to Richardson (1999, p. 35), “induction is a process by which, starting from data or private observations, one can formulate general propositions.”

In relation to the approach to the problem, this study is qualitative, according to the formulation of Richardson (1999), although we use percentages to represent the data. Other methodological aspects are summarized in Figure 1.

Additionally, this study has a theoretical conceptual nature, according to the framework of Alavi and Carlson (1992), since the investigation discusses the characteristics related to the admission and graduation requirements of the master in accounting degree programs at the universities analyzed and presents a summarized panorama of the requirements of these institutions.

### Table 1: English speaking countries studied

<table>
<thead>
<tr>
<th>Countries</th>
<th>Total number of universities</th>
<th>% in relation to the 400 best</th>
<th>% in relation to the sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>86</td>
<td>22.0</td>
<td>48.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>47</td>
<td>12.0</td>
<td>26.4</td>
</tr>
<tr>
<td>Australia</td>
<td>22</td>
<td>6.0</td>
<td>12.4</td>
</tr>
<tr>
<td>Canada</td>
<td>17</td>
<td>4.0</td>
<td>9.5</td>
</tr>
<tr>
<td>New Zealand</td>
<td>6</td>
<td>2.0</td>
<td>3.4</td>
</tr>
<tr>
<td>Totals</td>
<td>178</td>
<td>46.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

3.2 Population and Sample

The population of this study is composed of the 400 best universities in the world according to the ranking of the magazine U.S. News & World Report – World’s Best Universities, issued on September 21, 2010. The sample is defined by two criteria: the first is the limitation to universities in English-speaking countries and the second is to universities that offer master in accounting programs. Among the 400 leading institutions identified, 178 (46%) are in English-speaking countries, as shown in Table 1.
However, of these 178 universities, only 112 have master programs in accounting, as presented in Figure 2.

![Figure 2: Universities with master in accounting programs in English-speaking countries](image)

In searching for information at the websites of the universities in the sample, information was not available during the period of this study (January 10 to February 22, 2011) for the University of Waikato in New Zealand and the University of Colorado at Boulder in the United States. Therefore, the sample is composed of 110 universities with master in accounting programs.

### 3.3 Procedures for gathering and analyzing the data

As stated, we collected the data between January 10 and February 22, 2011 from the websites of the 110 master in accounting programs. Through this search, we identified whether some institutions grant a master in accounting degree in partnership with other programs and/or schools, as is often the case for programs in economics, business administration and finance, among others.

In accessing the sites, we sought to map:

- **i)** characteristics of the admission process;
- **ii)** characteristics of the course; and
- **iii)** requirements for graduation.

The admission characteristics examined were the prerequisites for applying and the aspects used for selection. In relation to the characteristics of the courses, we analyzed the focus of the master programs, the course duration, number of elective subjects offered and duration of the subjects. Finally, regarding the graduation requirements, we investigated the number of required and elective subjects, the average performance for passage and whether or not the programs required the publication of articles and defense of a dissertation. These characteristics were adapted from the study of Murcia, Borba and Ambrósio (2007).

The universities studied have various names for their programs, including “Master in accounting international”, “Master in accounting and finance” and “Master in business and accounting”, among others. Irrespective of the name, we sought to distinguish the focus of the courses – research or professional qualification – according to the descriptions given by the respective universities.
4. PRESENTATION OF THE RESULTS

For better understanding and analysis of the results, this section is divided into three subsections. In the first we present the characteristics of the admission process, in the second we discuss the characteristics of the courses themselves, and in the third we describe the requirements for obtaining a master’s degree in accounting. The information is summarized by country, as presented in item 3.2, due to the large number of universities.

4.1 Characteristics of the Admission Process

For description of the admission process, we analyzed the prerequisites for applying and the requirements that determine admission: what type of bachelor’s degree is required, whether the program requires candidates to take the GMAT/GRE and/or TOEFL, and the need for a letter of recommendation, personal statement and/or interview.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Australia</th>
<th>Canada</th>
<th>New Zealand</th>
<th>United Kingdom</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor degree or equivalent in any area</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Bachelor degree or equivalent in accounting or related field</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>Bachelor degree or equivalent in business with specialization in accounting</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Bachelor degree or equivalent in social sciences</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Limited to undergraduate students from the institution or partner institutions</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Personal statement</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Project</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Essays/papers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
</tbody>
</table>

Chart 3: Admission requirements

As can be seen in Chart 3, there are various requirements for admission, but the majority of the programs accept candidates with bachelor degrees in any field. A common requirement of the American universities studied that is not common among Brazilian master programs is a personal statement explaining the candidate’s interest in obtaining a master’s degree.

As prerequisites to for acceptance, only one Australian institution requires knowledge of algebra and calculus, and another institution requires dedication of 10 hours a week for each discipline. Of the Canadian institutions, only one requires an up-front non-refundable deposit (of $1,700).

The master programs in New Zealand did not present prerequisites at their sites. In the United Kingdom, two programs require a deposit, two universities require knowledge of mathematics and statistics and one requires knowledge of accounting, economics and finance. In the United States, 71% of the programs analyzed require applicants to have knowledge of accounting, finance, economics, taxes, statistics and mathematics. Since the majority of the programs do not demand that applicants have a bachelor degree in accounting, the institutions offer courses for candidates to obtain this knowledge, and the majority of the programs require accepted applicants to conclude such courses before starting their main studies.

With respect to the selection process, in general the programs analyzed use five criteria: GMAT/GRE, TOEFL (for applicants who are not native English speakers), GPA, interview and recommendation letter. Before presenting the results, a brief explanation is in order of the first three criteria.

The General Management Admission Test (GMAT) and Graduate Record Examination (GRE) are tests that do not require specific knowledge of accounting. They measure the quantitative knowledge and
analytic and writing skills of the candidates and can be compared to the ANPAD test, which is required by the majority of accounting master programs in Brazil (MURCIA, BORBA and AMBRÓSIO, 2007).

The Test of English as a Foreign Language (TOEFL) is a test required of applicants whose native tongue is not English.

The Grade Point Average (GPA) is the way the programs analyze the candidates’ previous school performance. As the name indicates, it is the average of the grades obtained during the undergraduate course, which varies from 0 to 4. Two of the universities studied have a different GPA scale, varying from 1 to 7, because besides the undergraduate grade point average, these universities also attribute scores to other questions.

Next we summarize the requirements for admission to the programs in each country.

The items most used by Australian institutions are the TOEFL (75%), followed by GPA (20%) and GMAT (10%). None of the institutions’ sites mention the need for an interview or letter of recommendation. Although not using the GPA, six institutions require candidates to have average performance of 60% to 65% in the subjects studied during their undergraduate or specialization course. In some universities, this average only covers the last two years of the undergraduate course.

The TOEFL and TOEFL are used by 33% of the institutions and a letter of recommendation is not required by any of them. In turn, the institutions in New Zealand do not use the GMAT/GRE, GPA, interview or letter of recommendation. However, 50% of the institutions require applicants to have good performance in their undergraduate course and require a minimum score on the TOEFL for applicants who are not native English speakers.

In the United Kingdom, the large majority (91%) of institutions require the TOEFL, 29% require a letter or recommendation, 11% require taking the GMAT/GRE and 5.7% have a minimum GPA and require an interview.

In United States, the GMAT/GRE is required by 96% of the programs, while 90% require the TOEFL, 81% require a letter of recommendation, 62% have a minimum GPA and only 21% conduct an interview as part of the admission process. When this is required, it is conducted either in person or by telephone, with the second option being aimed more at foreign applicants.

### 4.2 Characteristics of the Course

For description of the characteristics of the master in accounting courses, we considered the focus of the course, the duration of the course, the number of elective disciplines offered and the duration of the disciplines.

Regarding focus, we sought to identify which programs are aimed at training researchers versus those that focus on upgrading professional qualification of accountants. Figure 3 summarizes the results.
Based on Figure 3, it can be seen that 88% of the programs have focus on enhancing the professional qualification of accountants. That can be explained by the fact that a main aim of the majority of the programs is to prepare practicing accountants for the Certified Public Accountant (CPA) examination.

With respect to the duration of the courses, there is a good deal of disparity among the countries. Nevertheless, 64.7% of the programs in the United Kingdom and 70.8% in the United States last one year, with the students required to attend full time. In Australia, 30% of the programs last 18 months, while in Canada, 66% of the programs last this long and in New Zealand 50% last a maximum of two years.

Overall, 51% of the programs last only one year, in contrast to the situation in Brazil, where the more typical duration is 24 months. Many of the universities allow flexibility in this respect, whereby students can choose to attend full or part time, finishing sooner or later, respectively. In this respect, we identified two universities that offer part-time programs lasting 72 months.

Regarding the number of elective subjects offered by the programs, our aim was to identify the options students have to take classes in other subjects than those strictly related to accounting. In this context, the majority of the institutions (67%) do not disclose the elective subjects offered at their sites. However, more than 80% of those that do report the number of elective disciplines offered make available between 5 and 29 such disciplines. There is no alignment among the countries in this aspect, with the number of elective subjects ranging from 2 to 29.

Chart 4 summarizes the duration of the disciplines offered by the master degree programs.

<table>
<thead>
<tr>
<th>Duration</th>
<th>Australia</th>
<th>Canada</th>
<th>New Zealand</th>
<th>United Kingdom</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Semester</td>
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<td>2</td>
<td>-</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>Hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Not informed</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>22</td>
<td>45</td>
</tr>
</tbody>
</table>

Chart 4: Duration of disciplines offered by the institutions by country

In general, this information is not widely disclosed at the sites of the programs, but of those that do disclose this information, most (63%) disciplines last one semester.

4.3 Requirements to Obtain a Master’s Degree

To describe the characteristics for graduation from the programs, we analyzed the number of required and elective disciplines needed, the average performance and whether or not the institutions require the defense of a dissertation and publication of scientific articles.

There is no alignment of the nomenclature of the obligatory disciplines. In this respect, the courses have three quantitative requirements: “number of disciplines”, “number of hours” and “number of credits”, each representing the quantity of content that students must successfully complete to obtain a degree.

On this matter, the United States and United Kingdom are the countries that require the most mandatory disciplines. In the United Kingdom, more than 82% of the universities demand between four and nine required subjects. This contrasts sharply with Australia, where 35% of the universities have 12 required disciplines. Furthermore, the courses with a higher number of required disciplines generally do not require the students to write and defend a dissertation.

In relation to the number of elective subjects that must be completed to graduate, more than 37% of the universities require only two electives. The range of the number of required electives is the greatest in the United States. A curious fact was noted in Australian universities: Queensland University of Technology demands 3 required disciplines and 13 electives, while at the University of Tasmania the proportion is contrary, with 12 required subjects and 4 electives.
Chart 5: Minimum performance in disciplines required to graduate

Chart 5 shows that over 90% of the universities do not report the minimum performance the students need to achieve to graduate. However, this does not mean these universities do not have minimum performance requirements to earn a master’s degree, because unlike in the Brazilian context (where the minimum class attendance and scores for each quarter/semester are nearly always spelled out), this specification is not the norm internationally, where students only have to pass the required number of disciplines.

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>Canada</th>
<th>New Zealand</th>
<th>United Kingdom</th>
<th>United States</th>
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</thead>
<tbody>
<tr>
<td>n.i</td>
<td>18</td>
<td>2</td>
<td>3</td>
<td>34</td>
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<tr>
<td>50%</td>
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<td>60%</td>
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<td>1</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>70%</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>B Average</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
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<td>GPA of 3.0</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

Chart 6: Writing requirements for graduation

Chart 6 shows that of the 34 universities that require a dissertation to obtain a degree, more than 85% are in the United Kingdom. With respect to publication of articles, only one university in the sample has this requirement. It can be inferred that the absence of this requirement is related to the professional focus of the master programs. This contrasts with the Brazilian context, where the majority of master programs in accounting have a focus on qualification as professors/researchers and as such require publication of articles, whether as a graduation requirement or as a partial requirement to obtain a passing score in a particular discipline.

Finally, the study of Murcia, Borba and Ambrósio (2007, p. 11) identified the need for a broad range of previous fields of knowledge, such as statistics, mathematics and econometrics, among others. According to the authors, “the main graduate accounting programs have a relatively high number of disciplines involving quantitative methods. Disciplines such as economics, statistics and econometrics are requirements of the majority of courses analyzed.” In their view, there appears to be a concern in the programs regarding training of accounting researchers.

5. CONCLUSIONS

The aim of this study was to map the characteristics of the admission process, the course and graduation requirements of master in accounting programs at universities located in English-speaking countries. According to the current literature, there are some “sacrifices” that must be made by graduate accounting students at the master level, among them the cost and time required. Some authors even state that these sacrifices are too high. In this respect, many authors believe that the lack of accounting professors is also related to the difficulties of starting and finishing an advanced degree program in accounting, not only at the master level, but also at the doctoral level.
The present study contributes in the sense of identifying the characteristics that are required by master in accounting programs of 112 universities located in five English-speaking countries (United States, United Kingdom, Australia, New Zealand and Canada), tracing the profile of the requirements of the institutions studied, which can help in the restructuring of existing programs and in formulating new ones. The study also can serve to help potential applicants to choose the right program for their needs.

Among the specific contributions of this study, we observed that the master in accounting courses in the United States and United Kingdom demand the largest number of required disciplines. In the United Kingdom, for example, 82% of the universities demand between four and nine required disciplines. Another interesting observation is that in Australia 35% of the universities demand 12 required disciplines.

With respect to the number of elective subjects required for graduation, more than 37% of all the universities only require two electives. We also noted a curious point in Australia, where Queensland University of Technology demands 3 required disciplines and 13 electives while at the University of Tasmania the proportion is the contrary, with 12 mandatory disciplines and only 4 electives.

On the matter of admission and graduation requirements, only one Australian institution requires applicants to have knowledge of algebra and calculus to attend, and one institution requires dedication of 10 hours a week to each discipline. Among Canadian universities, one requires an up-front fee of $1,700 as a way to discourage desistance.

In the United States, 71% of the programs analyzed require knowledge of accounting, finance, economics, taxes, statistics and mathematics for entrance. Since the majority of programs do not require applicants to have a bachelor’s degree in accounting, the institutions typically offer special courses where admitted students can obtain sufficient knowledge in these fields before starting their main study program.

In general, the master programs offered in the United States and United Kingdom are more demanding in relation to requirements for graduation than the programs in the other countries, which permits us to conclude that the programs offered in these countries are better than those offered by universities in Australia, Canada and New Zealand.

In Australia, while the majority of universities offer master courses that last two years, one university offers a course lasting up to six years, which in the Brazilian context would be enough to earn a master and doctorate in accounting.

Another finding of this study was the lack of standardization of the sites. In the Brazilian context, the programs disclosed by the websites are those offered by the universities themselves. In the international context (meaning in the United States, Canada, United Kingdom, Australia and New Zealand), some institutions’ sites provide information about programs offered by a business school linked to the university, a fact that somewhat hampered identification of the findings.

Regarding the characteristics of the admission process, basically all the universities investigated have criteria to select their students. The most common are a bachelor’s degree or equivalent, personal statement, letter of recommendation, minimum scores on the TOEFL and GMAT/GRE and minimum undergraduate GPA.

With respect to the characteristics of the course, the focus is mainly on professional enhancement. In general, the programs last one year, the elective disciplines offered range from 2 to 29 and the disciplines last one semester.

Finally, on the matter of graduation requirements, the majority of the institutions only evaluate their students in the disciplines taken, without a requirement to defend a dissertation or publish an academic article.

As recommendation for future research, it would be interesting to carry out a similar study of the master in accounting programs in Brazil, to compare their characteristics against those in other countries. We can also recommend a similar study focusing on doctoral programs to verify what other “sacrifices” may be related to the qualifications or the lack of accounting professors.
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