RANKING OF ACCOUNTING DOCTORAL PROGRAMS BASED ON STUDENT RATINGS IN RATEMYPROFESSORS.COM AND THE EFFECT OF FORMAL TEACHING TRAINING ON THE RANKINGS

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ABSTRACT

Aim/Purpose  
Although there are calls for better teaching training for accounting doctoral students, there are limited research findings on rankings of accounting doctoral programs based on the teaching effectiveness of their graduates.

Background  
There are two research objectives of this study. First, we rank the US accounting doctoral programs based on the student perceptions of the teaching effectiveness of their graduates using student ratings in ratemyprofessors.com. Second, we examine whether the ranking is associated with the presence of formal teaching training in the doctoral programs.

Methodology  
Overall quality ratings posted in ratemyprofessors.com are collected for 822 accounting professors who graduated in 2001-10 from 75 US accounting doctoral programs. The curriculum information is collected from the web pages of their doctoral programs.

Contribution  
This study fills two voids in the literature. Unlike previous accounting doctoral studies that rank programs based on the amount of research output of the graduates, this paper ranks programs based on the perceived teaching effectiveness of the graduates. It also adds insights into the importance of offering formal teaching training to doctoral students, which is called for by the AACSB.
Findings
We find that the teaching ranking in this study is only mildly related to previous research rankings that were based on the research output of doctoral graduates. We also find that doctoral programs with higher rankings in this study are more likely to have formal teaching training in their programs.

Recommendations for Practitioners
Given the findings in this study and the literature, accounting doctoral program administrators should incorporate or strengthen a formal teaching training component in doctoral programs.

Recommendations for Researchers
There is a need for researchers on doctoral program evaluations to broaden their scope of assessment to include both teaching scholarship and research output of the doctoral graduates.

Impact on Society
The findings in this study show that there is limited formal teaching training for accounting doctoral students, which is consistent with results in the literature of other fields. This study echoes the calls for more training on how to teach to improve the teaching ability of the graduates. When doctoral graduates become more effective professors, the learning outcome among college students can be improved as a result.

Future Research
Future research can explore other better and more direct measures of teaching effectiveness in the evaluation of the accounting doctoral graduates and the accounting doctoral programs. The effect and the methods of more innovative pedagogical training on doctoral students can also be examined.

Keywords
doctoral program, accounting doctoral program, accounting program, teaching training, ratemyprofessors, student rating

INTRODUCTION
Evaluations of accounting programs and academic journals are important issues. There are a lot of ranking studies in accounting. They include rankings of accounting journals, of research productivity of individual accounting faculty members, and of accounting departments. For examples, Ballas and Theoharakis (2003), Lowe and Locke (2005), Bonner, Hesford, Stede, and Yong (2006), and Chan, Chan, Seow, and Tam (2009) examined the quality and rankings of accounting journals. Zivney, Bertin and Gavin (1995), Hasselback, Reinstein, and Schwann (2000), and Pickerd, Stephens, Summers, and Wood (2011) investigated the rankings of individual researchers. Other studies such as Andrews and McKenzie (1978), Chan and Liano (2009), Reinstein and Hasselback (1997), and Coyne, Stephens, Summers, and Wood (2010) examined the rankings of accounting departments based on research productivity and publication quality.

One particular area of accounting ranking studies is to focus on the quality of accounting doctoral programs based on research output and placements of the doctorates. Hasselback and Reinstein (1995), Brown and Laksmana (2007), and Stephens, Summers, Williams, and Wood (2011) ranked accounting doctoral programs based on the amount of research productivity of their graduates publishing in top accounting journals. Brown (1996), and Brown and Laksmana (2004) ranked accounting doctoral programs based on the numbers of citations of their research in leading journals and downloads in Social Science Research Network, respectively, as measures of research impact. In addition, Baldwin and Trinkle (2013) ranked accounting doctoral programs based on the initial job placements of their graduates. Programs are ranked higher if more of the graduates are placed in higher ranked research accounting programs. Finally, Zamojcin, and Bernardi (2013), and Holderness, Myers, Summers, and Wood (2014) noted that accounting literature puts less emphasis on education research. Thus, they included rankings of accounting programs and accounting doctoral programs according to their research productivities in accounting education journals.
There are two research objectives in this study. The first objective is to rank the U.S. accounting doctoral programs based on student perception of teaching effectiveness using student ratings of their graduates on the ratemyprofessors.com (RMP) website. Lans (2018) suggested that teaching effectiveness is not a directly observable variable, and is often defined as the teaching practices that enhance student learning. There is no one single perfect measure of teaching effectiveness, just as there is no one single perfect measure of research quality. Student evaluations or ratings are generally considered as one of the most important mechanisms to reflect teaching effectiveness (Accounting Education Change Commission [AECC], 1993). Bell, Frecka, and Solomon (1993) found a significant correlation between accounting administrators’ rating of faculty teaching effectiveness and students’ rating of faculty teaching effectiveness. Gannon (2018) also suggested that despite the potential biases in student evaluation, it is still the best available measure of teaching effectiveness. Symbaluk and Howell (2010) concluded that even with the potential biases in student evaluations, they are reasonably valid measures of teaching effectiveness. RMP is a website on which students can leave their ratings and comments of faculty members. Similar to official student evaluations, student ratings in RMP are student perceptions of teaching effectiveness. Prior studies have found significant correlations between official student evaluations and student ratings in RMP (Bleske-Rechek & Fritsch 2011; Silva, Silva, Quinn, Draper, Cover, & Munoff, 2008). Therefore, this study uses the RMP’s student ratings of the accounting doctoral graduates to rank their doctoral programs.

The second objective of this study is to examine the effect of formal teaching training on the doctoral program ranking in this study. In recent years, teaching effectiveness has become more and more critical as there is an increasing emphasis being put on outcome-based college education in general, particularly in the field of accounting (Association to Advance Collegiate Schools of Business [AACSB], 2013; Pathways Commission, 2014). Accounting doctoral programs traditionally provide no or limited teaching training to their graduates, although some have begun to offer teaching seminars to their doctoral students in recent years (Callahan, Spiceland, Spiceland, and Hairston, 2016; Dunn, Hooks, & Kohlbeck, 2016). A lack of teaching training not only affects accounting students’ learning adversely, it also induces a significant amount of stress to accounting professors (Ameen, Guffey, & Jackson, 2002). The Association to Advance Collegiate Schools of Business (AACSB) report on the status of business doctoral programs in 2013 suggested that doctoral programs should provide more training in teaching for their doctoral students and should not just focus narrowly on training in research. Thus, this study examines the relationship between our doctoral program rankings and the presence of formal teaching training in the programs.

The findings show that the doctoral program rankings based on RMP responses only carry very weak correlation with the rankings obtained based on research productivity in prior studies. We also find that doctoral programs with formal teaching training tend to have better ratings on RMP among their graduates. This study provides two main contributions to the literature. First, the findings of this study fill a void in the literature of ranking accounting doctoral programs since previous studies have not considered the teaching effectiveness among their graduates. This study utilizes a large sample of 822 accounting doctoral graduates in 2001-10 from 75 doctoral programs to examine student perception of teaching effectiveness. To the best of our knowledge, there has not been any teaching-related assessment of accounting doctoral graduates that has included such a large data set. Since both teaching and research are important faculty responsibilities, this study contributes to a more balanced evaluation of accounting doctoral programs in the literature. Second, this study contributes to the scholarship of teaching and learning in accounting by examining the benefit of formal teaching training in accounting doctoral programs. Boyer (1990) suggested that scholarship includes scholarship of discovery, scholarship of integration, scholarship of application, and scholarship of teaching. Huber (2013) summarized the extension of Boyer into the scholarship of teaching and learning in the literature to include having scholars critically evaluate teaching and learning processes and communicate their findings to other scholars. While there are calls for paying more attention to the teaching training of accounting doctoral programs and the importance of conducting accounting education research (Holder-Webb & Trompeter, 2016; Pierre, Wilson, Ravenscroft, & Rebele, 2009),
there is only limited evidence in the accounting literature of the effect of formal teaching training on the performance of doctoral graduates. This study can provide important findings to administrators for evaluating programs, to employers for hiring new faculty members, to colleges for offering teaching seminars, and to potential doctoral students for choosing their programs. The rest of this paper is organized as follows. The next two sections provide summaries of the related literature on accounting doctoral programs and related literature on RMP. Research methodology and findings are provided after the literature reviews and concluding remarks are provided at the end.

**RELATED LITERATURE ON ACCOUNTING DOCTORAL PROGRAMS AND TRAINING**

Teaching, research, and service are the three primary responsibilities of accounting professors (Beyer, Herrmann, Meek, & Rapley, 2010). They are generally considered as interrelated and complementary, especially between teaching and research since they both require strong analytical, communication, and technical skills (Beaver, 1992; Dyckman, 1989; Kaplan, 1989; Kinney, 1989; Wyatt, 1989). Thus, one approach in the evaluation of accounting doctoral programs is to rank the programs based on the research output of the doctoral graduates. For examples, Hasselback and Reinstein (1995) ranked accounting doctoral programs based on the publication records of accounting doctorate graduates in 1978-1992 in a comprehensive set of 41 accounting journals. Brown and Laksmna (2007), and Stephens, et al. (2011) ranked the research productivity of accounting doctoral graduates in 8 and 11 top accounting journals, respectively. Even with different sample periods and weighting schemes, about 70% of their top 20 accounting doctoral programs are the same in these two studies. Baldwin and Trinkle (2013) used a different approach in ranking accounting doctoral programs based on their initial job placements. Doctoral graduates are given higher rankings if their initial employed institutions rank higher in Chan, Chen, and Cheng (2007)’s global research rankings of accounting programs.

Holderness, et al. (2014) suggested that previous rankings of accounting programs and researchers have largely excluded accounting education journals given the perception of their lower quality. This perception is contradictory to the fact that accounting education is an important research area that can provide valuable information to accounting educators. As such, Bernardi and Zamojcinc (2013) extended the prior literature by ranking doctoral programs based on their graduates’ publications in 13 accounting education journals. They found that the rankings based on accounting education research are significantly different from those based on other areas of accounting research. Holderness, et al. (2014) reported similar findings in their rankings of accounting programs based on faculty members’ publications in education-based research. They found a very low correlation between their rankings and prior studies of accounting department rankings. Thus, Holderness, et al. (2014) suggested that it is important to have separate rankings for different areas of accounting research.

Teaching effectiveness and research productivity are the two most important criteria for tenure and promotion in academia. Research productivity generally carries a lot more weight than teaching accomplishment in research-oriented institutions (Alshare, Wenger, & Miller, 2007; Schultz, Meade, & Khurana, 1989; Street, Baril, & Benke, 1993). Even in some teaching-oriented institutions, publications also play a critical role in getting promotion and tenure. As a result, most accounting doctoral programs primarily focus on analytical skills and disciplinary knowledge and overlook the importance of teaching skills of their doctoral students (Allgood, Hoyt, & McGoldrick, 2018; Brightman, 2009; Holder-Webb, & Trompeter, 2016; Marx, Garcia, Butterfield, Kappen, & Baldwin, 2016). Panozzo (1997), and Gill and Hoppe (2009) also observed the primary focus of U.S. business doctoral programs on empirical research skills. In an attempt to address this issue, AACSB (2013) explicitly states that "the timing is right for greater attention to laying the foundations for effective teaching within doctoral programs."
The lack of teaching training in doctoral programs is a common and persistent problem in many disciplines. For examples, Alsop (2018) reported a Twitter poll that only 19% of 2,248 respondents indicated that they received decent teaching training in their graduate programs. Bullin (2018) and Maynard, Labuzienski, Lind, Berglund, and Albright (2017) both documented that only a small percentage of doctoral programs in nursing and social work provide formal teaching training to their doctoral students. Gale and Golde (2004) suggested that doctoral programs should not only focus on the disciplinary scholarship of discovery but should also introduce the scholarship of teaching and learning to their students early in the doctoral programs. Alkathiri and Olson (2019) discussed the benefits of a formal preparatory course in the doctoral programs that discussed job responsibilities including teaching strategies and practices of a professor.

Several recent accounting studies examined the approaches related to enhance the quality of teaching in accounting doctoral programs. Dunn, et al. (2016) conducted a survey of 75 accounting professors, who graduated in 2009-2011, regarding their teaching training in their doctoral programs. The authors found that 60% of the survey participants received no or minimal training from their doctoral programs or employed institutions. Additionally, 60% of survey participants indicate that they acquired teaching skills based on their own personal efforts. The primary source of teaching training in their doctoral programs was working as a teaching assistant in teaching a class. Very few participants indicated that there were separate courses or workshops on teaching. Using the participants’ self-reported student evaluations, the authors found that student evaluations were positively related to the research rankings of the doctoral programs and the amount of teaching experience in the doctoral programs. Callahan, et al. (2016) described a teaching practicum course in an accounting doctoral program. It consisted of a one-credit-hour course that students took in two separate semesters. The courses involve weekly sessions on a variety of teaching skill topics as well as faculty mentorship and other teaching training activities. The authors reported that students who took the courses received higher evaluations that the earlier students who did not take the courses. Although a separate teaching course in an accounting doctoral program is not a general practice, such a course is indeed needed in doctoral programs (Williams 1966).

Given the recent call for putting greater emphasis on quality of teaching by the Pathways Commission and AACSB, among others, one objective of this study is to rank accounting doctoral programs based on the student ratings of their graduates. Although Bell, et al. (1993), and Bline, Perrault, and Zheng (2016) found that research productivity and expertise are positively correlated with teaching ratings and students’ CPA Exam passing rates, the research findings on the relationship between teaching effectiveness and research productivity are mixed in the literature (Magi & Beerkens, 2016). Therefore, the previous doctoral program rankings based on the publication records of the doctorates may not necessarily be similar to the rankings based on student ratings. Thus, our ranking of doctoral programs based on student ratings in RMP serves as an important attempt to evaluate doctoral programs from a different and yet important perspective – student perception of teaching effectiveness.

**Related Literature on RMP**

This study uses overall quality rating in RMP as a measure of student perceptions of teaching effectiveness. RMP computed the average of helpfulness and clarity ratings and used them as the overall quality ratings before May 18, 2016. Since then, students assign the overall quality ratings directly. Easiness is a separate rating component in RMP. Similar to official student evaluations, RMP’s student ratings also have potential measurement errors and biases. Clayson (2014) examined the halo bias in RMP ratings. Clayson suggested that if instructors are perceived as too easy or too difficult, learning could be adversely affected. As such, there should be a curvilinear relationship between the easiness rating and helpfulness rating in RMP if helpfulness rating is related to learning. The author randomly collected RMP data for 540 professors in 54 colleges from different regions of the United States. These schools include public flagship, regional, and private universities. The data
are analyzed at the student, instructor, and class levels. The findings suggested that students tend to rate professors as easier when they rate the professors as more helpful, and do not distinguish the two concepts very well. Clayson concluded that ratings in RMP may not measure student learning. Instead, the ratings can be considered as a likeability scale because students tend to give more favorable ratings to all RMP rating components when they like the instructors. Felton, Koper, Mitchell, and Stinson (2008) examined the attractiveness bias in RMP ratings. RMP had a hotness rating in the past which let students rate the professors according to their attractiveness. RMP dropped this rating in 2018. Using a large data set of 6,952 professors from 369 institutions in 2003, the authors found that the hotness rating is positively correlated with helpfulness, clarity, quality, and easiness ratings. The findings suggested that more attractive professors receive better ratings in RMP. Despite the potential limitations, other studies suggest that RMP can provide reliable public data on student perceptions of teaching effectiveness. Coladarci and Kornfield (2007) examined the relationship between student ratings posted in RMP and official student ratings obtained by the respective institutions. The authors collected data on 426 instructors at the University of Maine that also had students ratings posted in RMP. The authors found significant correlations between the RMP ratings and official student ratings. Specifically, overall quality rating in RMP is highly correlated with the overall official student rating of the instructor. In addition, easiness rating in RMP is significantly correlated with official student rating on course workload. The authors concluded that RMP ratings should not be dismissed as being meaningless. Albercht and Hoopes (2009) examined the RMP data specifically for business students. One sample school is a private university with about 3,000 business school students and the other sample school is a public university with about 4,000 business school students. A minimum of five student ratings in RMP is required for a professor to be included in the final sample. The authors found that students ratings posted in RMP are significantly correlated with official student ratings for 75 professors from these two business schools.

Two other studies examined the validity of RMP ratings using different approaches. Symbaluk and Howell (2010) compared the RMP ratings of teaching-award winners and those of research-award winners. The sample includes 120 winners of 3M Teaching Fellowship and 119 winners of Killam Research Fellowship in Canada. The authors found that the teaching-award winners have significantly better RMP student ratings. In addition, a higher percentage of teaching-award winners have received positive student comments in RMP. The findings are consistent with the idea that RMP ratings are reflective of teaching effectiveness. Villalta-Cerdas, McKeny, Gatlin, and Sandi-Urena (2014) compared the characteristics of students who have and who have not posted in RMP. Using a survey of 398 students in two chemistry courses in a large research-intensive university, the authors found that there is no significant difference between the two groups of students regarding their characteristics such as gender, major, course load, and GPA. Although posting in RMP is voluntary, the findings in Villalta-Cerdas, et al. (2014) suggested that there is no self-selection bias in RMP ratings. Overall, some prior studies have found potential biases in RMP ratings that are similar to that of official student evaluations. However, other studies have found that RMP is a reasonable measure of student perceptions of teaching effectiveness. Although RMP data is not a perfect measure of teaching effectiveness, it is the only large scale public data on student perceptions of teaching effectiveness.

DATA AND RESEARCH FINDINGS

An initial sample of accounting doctoral graduates is collected from the accounting doctoral graduate directory in Hasselback (2011). To be included in the final sample, a graduate must have received an accounting degree from a U.S. doctoral program in 2001-2010 and employed by a U.S. institution. There have to be at least five graduates listed in RMP for a doctoral program to be included in the final sample. A higher minimum requirement for this criterion could be a bias against programs with less doctoral students. The overall quality ratings of the graduates are collected manually from RMP. RMP defines the overall quality rating as how well a professor teaches the course material and how
helpful a professor is outside the classroom during their office hours and at other times. Two
gradient research assistants were used to double-check the data to avoid human error. We matched
the record in Hasselback (2011) with that in RMP by using the full name of the graduate and the
name of the employing school. We also repeated the data collection process using a more recent
Hasselback (2015) to capture graduates that have changed jobs. In a few rare cases where there were
multiple records for a graduate because of a job change or teaching in multiple campuses, we used
the earlier record.

The final sample consists of 822 accounting doctoral graduates from 75 accounting doctoral
programs. Table 1 provides some descriptive statistics of the sample. The numbers of graduates
among the sample years reported in Panel A are fairly evenly distributed in 2001-10. We randomly
picked the graduates in 2008 to perform a subsample analysis to find out the type of schools by
which they are employed. The goal of this subsample analysis is to find out whether they are
employed by teaching or research schools. If, for example, doctoral graduates are employed by
teaching and research schools in equal amount, doctoral students should have similar training in both
teaching and research. In general, research schools have teaching load of 12 credit hours per
academic year while teaching schools have teaching load of 24 credit hours per academic year.
Schools with an equal emphasis on teaching and research usually have teaching load of 18 credit
hours per academic year. We randomly picked the year 2008 for the subsample analysis instead of
the full sample since almost all of the accounting doctoral graduates are employed by AACSB schools
with similar characteristics in each year. The results are shown in Panel B. Out of the 95 doctoral
graduates in 2008, 36 are employed by AACSB schools with doctoral programs and 56 are employed
by AACSB schools without doctoral programs. The remaining 3 are employed by non-AACSB
schools. For the 92 AACSB schools from Panel B, we collected their general orientation code from
the AACSB’s website and the summary statistics are reported in Panel C. AACSB schools self-report
their programs’ high, medium, or low emphases on teaching, intellectual contributions, and service
using a code. Three schools did not report their programs’ orientation codes. Of the remaining 89
schools, 25 (code 1 and code 6 combined) schools report high emphasis in teaching and 28 schools
report high emphasis on intellectual contributions. There are 35 schools report equally high emphasis
on teaching and intellectual contributions. Finally, one school has equal emphasis on teaching,
intellectual contributions, and service. A total of 61 out of the 89 schools put a high emphasis on
teaching, and the remaining 28 put a medium emphasis on teaching. These numbers clearly reveal the
importance of teaching in the schools. Panels B and C show that the majority of accounting
doctoral graduates are employed by AACSB schools which do not have a doctoral program. It
reinforces the importance of this study with an objective to rank accounting doctoral programs
based on the teaching performance of their graduates.

Table 1: Number of Doctoral Graduates by Year, Employer Types,
and AACSB Orientation Codes

<table>
<thead>
<tr>
<th>Panel A: Number of Doctoral Graduates by Year</th>
<th># of Doctoral Graduates in the Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>80</td>
</tr>
<tr>
<td>2002</td>
<td>77</td>
</tr>
<tr>
<td>2003</td>
<td>66</td>
</tr>
<tr>
<td>2004</td>
<td>85</td>
</tr>
<tr>
<td>2005</td>
<td>94</td>
</tr>
<tr>
<td>2006</td>
<td>87</td>
</tr>
<tr>
<td>2007</td>
<td>94</td>
</tr>
<tr>
<td>2008</td>
<td>95</td>
</tr>
<tr>
<td>2009</td>
<td>75</td>
</tr>
<tr>
<td>2010</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>822</td>
</tr>
</tbody>
</table>
Panel B: Employer Types for 2008 Graduates  
(The year 2008 was randomly selected)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>AACSB schools with doctoral program</td>
<td>36</td>
</tr>
<tr>
<td>AACSB schools without doctoral program</td>
<td>56</td>
</tr>
<tr>
<td>Non-AACSB schools</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
</tr>
</tbody>
</table>

Panel C: AACSB General Orientation Codes for the 89 AACSB Schools in Panel B  
(listed in the order of high emphasis; medium emphasis; and low emphasis)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>23 (teaching; intellectual contributions; service)</td>
</tr>
<tr>
<td>2</td>
<td>28 (intellectual contributions; teaching; service)</td>
</tr>
<tr>
<td>5</td>
<td>35 (equal for teaching and intellectual contributions; NA; service)</td>
</tr>
<tr>
<td>6</td>
<td>2 (teaching; equal for intellectual contributions and service; NA)</td>
</tr>
<tr>
<td>7</td>
<td>1 (equal for teaching, intellectual contributions and service; NA; NA)</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
</tr>
</tbody>
</table>

Table 2 presents the summary statistics of the variables used in the analysis. The average number of graduates per doctoral program in the sample is about 11, with a range from 5 to 27. The average number of student comments in RMP is 15.64 times, and the average rating is 3.6804 on a 5-point scale, with 1 being the lowest and 5 being the highest. We calculated a weighted average student rating, WEIGHTED_RATING, and a simple average rating, AVERAGE_RATING. WEIGHTED_RATING is computed using the number of student comments as the weight in combining the student ratings among doctoral graduates of each doctoral program. AVERAGE_RATING is the simple average of quality ratings among the doctoral graduates for a doctoral program. To compute the WEIGHTED_RATING, we first find the product between each graduate's quality rating and the number of student postings for this graduate. The WEIGHTED_RATING for a doctoral program is the sum of the products of all of its graduates divided by the number of all student postings for all of its graduates. Thus, graduates with more student postings will have a bigger weight in the overall WEIGHTED_RATING of a doctoral program since more student postings may represent a more reliable consensus. Each of the two rating measures has advantages and disadvantages in dealing with unusually high or low ratings for a few graduates. So we used both of them as sensitivity measures. The average WEIGHTED_RATING is 3.6239, and the average AVERAGE_RATING is 3.6429 with similar sample distributions. HISTORY is defined as 2017 minus graduation year of the first doctoral student reported in Hasselback (2015). The average HISTORY is 51.44 years with a range from 15 years to 95 years. SIZE is the total number of accounting doctoral graduates in each program reported in Hasselback (2015). The average SIZE is 98.96 graduates with the minimum and maximum being 17 and 373, respectively. HISTORY and SIZE show that there is a wide range of program histories and program sizes among the doctoral programs. While some programs have a long history, they have few graduates. We also computed STUDENT as SIZE divided by HISTORY to show the number of graduates on a per year basis. STUDENT has an average of 1.8818 which suggests that a program graduates about 2 doctoral students per year. GENERAL_RESEARCH is equal to 1 if a doctoral program is ranked as one of the top 25 programs in Stephens, et al. (2011). The ranking is based on the publication productivity of graduates in 2001-2009 in 11 major academic accounting journals in the first 6 years after graduation. ED_RESEARCH is equal 1 if a doctoral program is ranked as one of the top 25 programs in Zamojcin and Bernardi (2013) based on the
accounting education publication record of doctoral graduates in 2003-2012 in 11 accounting journals. These are mostly journals with a specific focus in accounting education research. Given that there are 75 programs in our sample, about one-third of them are included in these two rankings. Finally, about 35% of the doctoral programs offer substantial teaching training for their students. We reviewed the accounting doctoral program curriculums from their schools’ websites. There are only 26 out of the 75 doctoral programs that have required formal teaching training for the doctoral students in the forms of credit bearing courses, non-credit bearing courses, or required regular weekly workshops on teaching skills. Other programs have teaching training in the forms of teaching courses for at least one to two semesters under the supervision of their advisors, brief orientation on teaching activities, online teaching tutorials, or availability of university teaching seminars. The variable, TRAINING, is equal 1 if the doctoral program has required formal teaching training.

Table 2: Summary Statistics

<table>
<thead>
<tr>
<th>Panel A: 822 accounting doctoral students</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td># of doctoral students</td>
<td>10.96</td>
<td>11.0000</td>
<td>5.0000</td>
<td>27.0000</td>
</tr>
<tr>
<td># of students commented</td>
<td>15.64</td>
<td>10.0000</td>
<td>1.0000</td>
<td>132.0000</td>
</tr>
<tr>
<td>Student ratings</td>
<td>3.6804</td>
<td>3.8000</td>
<td>1.0000</td>
<td>5.0000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: 75 accounting doctoral programs</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHTED_RATING</td>
<td>3.6239</td>
<td>3.5742</td>
<td>2.9160</td>
<td>4.2481</td>
</tr>
<tr>
<td>AVERAGE_RATING</td>
<td>3.6429</td>
<td>3.6429</td>
<td>2.7167</td>
<td>4.2167</td>
</tr>
<tr>
<td>HISTORY</td>
<td>51.4400</td>
<td>49.0000</td>
<td>15.0000</td>
<td>95.0000</td>
</tr>
<tr>
<td>SIZE</td>
<td>98.9600</td>
<td>97.0000</td>
<td>17.0000</td>
<td>373.0000</td>
</tr>
<tr>
<td>STUDENT</td>
<td>1.8818</td>
<td>1.8055</td>
<td>0.4561</td>
<td>4.7820</td>
</tr>
<tr>
<td>GENERAL_RESEARCH</td>
<td>0.3466</td>
<td>0.0000</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>ED_RESEARCH</td>
<td>0.3200</td>
<td>0.0000</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>TRAINING</td>
<td>0.3466</td>
<td>0.0000</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

WEIGHTED_RATING = doctoral program’s student rating based on weighted RMP ratings
AVERAGE_RATING = doctoral program’s student rating based on simple average RMP ratings
HISTORY = 2017 minus graduation year of the first doctoral student
SIZE = total number of doctoral graduates since beginning of the program to 2016
STUDENT = SIZE divided by HISTORY
GENERAL_RESEARCH = 1 if a doctoral program is a one of the top 25 doctoral programs in Stephens et al. (2011); 0 otherwise
ED_RESEARCH = 1 if a doctoral program is a one of the top 25 doctoral programs in Zamojcin and Bernardi (2013); 0 otherwise
TRAINING = 1 if a doctoral program offers substantial teaching training; 0 otherwise

Table 3 reports the findings for the first research objective in ranking accounting doctoral programs based on student ratings in RMP. Based on weighted average ratings, the top 10 schools with the highest ratings among their graduates are University of Colorado, University of North Carolina, University of Texas at Austin, University of Chicago, University of Central Florida, Virginia Tech, New York University, University of Pittsburgh, Indiana University, and University of North Texas. Using the simple-average ratings, the top 10 schools are University of Colorado, University of North Carolina, Stanford University, University of Chicago, Virginia Tech, University of Tennessee, University of Washington, Oklahoma State University, Baruch College, and University of Kentucky.
University of Colorado and University of North Carolina are ranked the top two schools regardless of the weighting method being used. In addition, 17 out of the 25 schools identified under the different ranking schemes are the same. The high consistency between the two lists indicates that the results are, in general, robust to the use of averaging methods in combining student ratings. These rankings are quite different from previous rankings of doctoral programs based on research output of their graduates, which suggest that a more balanced evaluation of doctoral programs including both research and teaching activities of doctoral graduates is needed.

Table 3: Doctoral Programs Rankings

<table>
<thead>
<tr>
<th>Weighted Average Rank</th>
<th>School</th>
<th>Simple Average Rank</th>
<th>School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>University of Colorado</td>
<td>1</td>
<td>University of Colorado</td>
</tr>
<tr>
<td>2</td>
<td>University of North Carolina</td>
<td>2</td>
<td>University of North Carolina</td>
</tr>
<tr>
<td>3</td>
<td>University of Texas at Austin</td>
<td>3</td>
<td>Stanford University</td>
</tr>
<tr>
<td>4</td>
<td>University of Chicago</td>
<td>4</td>
<td>University of Chicago</td>
</tr>
<tr>
<td>5</td>
<td>University of Central Florida</td>
<td>5</td>
<td>Virginia Polytechnic and State University</td>
</tr>
<tr>
<td>6</td>
<td>Virginia Polytechnic and State University</td>
<td>6</td>
<td>University of Tennessee</td>
</tr>
<tr>
<td>7</td>
<td>New York University</td>
<td>6</td>
<td>University of Washington</td>
</tr>
<tr>
<td>8</td>
<td>University of Pittsburgh</td>
<td>8</td>
<td>Oklahoma State University</td>
</tr>
<tr>
<td>9</td>
<td>Indiana University</td>
<td>9</td>
<td>Baruch College</td>
</tr>
<tr>
<td>10</td>
<td>University of North Texas</td>
<td>10</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>11</td>
<td>University of Georgia</td>
<td>11</td>
<td>Purdue University</td>
</tr>
<tr>
<td>12</td>
<td>Purdue University</td>
<td>12</td>
<td>University of Southern California</td>
</tr>
<tr>
<td>13</td>
<td>University of Southern California</td>
<td>13</td>
<td>University of California at Berkeley</td>
</tr>
<tr>
<td>14</td>
<td>Stanford University</td>
<td>14</td>
<td>University of Texas at Austin</td>
</tr>
<tr>
<td>15</td>
<td>Florida State University</td>
<td>15</td>
<td>Indiana University</td>
</tr>
<tr>
<td>16</td>
<td>Oklahoma State University</td>
<td>16</td>
<td>University of Mississippi</td>
</tr>
<tr>
<td>17</td>
<td>University of California at Irvine</td>
<td>17</td>
<td>Michigan State</td>
</tr>
<tr>
<td>18</td>
<td>University of Mississippi</td>
<td>18</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>19</td>
<td>University of Kentucky</td>
<td>19</td>
<td>Florida State University</td>
</tr>
<tr>
<td>20</td>
<td>University of Houston</td>
<td>20</td>
<td>University of Illinois</td>
</tr>
<tr>
<td>21</td>
<td>Baruch College</td>
<td>21</td>
<td>Cornell University</td>
</tr>
<tr>
<td>22</td>
<td>University of Tennessee</td>
<td>22</td>
<td>Texas Tech University</td>
</tr>
<tr>
<td>23</td>
<td>Rutgers University</td>
<td>23</td>
<td>University of Oregon</td>
</tr>
<tr>
<td>24</td>
<td>University of Arizona</td>
<td>24</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>25</td>
<td>University of California at Berkeley</td>
<td>25</td>
<td>Ohio State University</td>
</tr>
</tbody>
</table>

Cross-sectional analyses using the following regression models are utilized to examine the relationship between doctoral programs’ teaching rankings and the presence of formal teaching training in the programs. According to our second research objective, we examined whether doctoral programs with formal teaching training result in higher rankings. Therefore, we expect the coefficient estimate to be positive for TRAINING.

H1: There is a positive relationship between doctoral program rankings based on RMP ratings and presence of formal teaching training in the doctoral programs.

We included control variables of program size, program history, and their research rankings since these variables may also affect the rankings as suggested in the literature (Dun, et al., 2013; Holder-
We expect that rankings are higher for more established and larger programs since they tend to have more experiences and resources in running their doctoral programs. We also expect that top general accounting research or top accounting education research doctoral programs to rank higher as well, since teaching and research skills are highly correlated in terms of the analytical and communication skills required. The ranking is based on either WEIGHTED_RATING or AVERAGE_RATING. We inverted the two rating measures in the regression analysis by having 76 minus the raw ranking so that a larger coefficient value is associated with a higher ranking. Thus, we conduct the one-tailed test on the regression coefficients of the independent variables.

\[
\text{Ranking}_i = \beta_0 + \beta_1 \text{HISTORY}_i + \beta_2 \text{SIZE}_i + \beta_3 \text{General Research}_i + \beta_4 \text{ED Research}_i + \beta_5 \text{TRAINING}_i + e_i
\]  

(1)

\[
\text{Ranking}_i = \beta_0 + \beta_1 \text{STUDENT}_i + \beta_2 \text{General Research}_i + \beta_3 \text{ED Research}_i + \beta_4 \text{TRAINING}_i + e_i
\]  

(2)

Where:

- Ranking = 76 minus ranking based on WEIGHTED_RATING or based on AVERAGE_RATING
- HISTORY = 2017 minus graduation year of the first doctoral student
- SIZE = total number of doctoral graduates since the beginning of the program to 2016
- STUDENT = SIZE divided by HISTORY
- GENERAL_RESEARCH = 1 if a program is one of the top 25 doctoral programs in Stephens et al. (2011); = 0 otherwise
- ED_RESEARCH = 1 if a program is one of the top 25 doctoral programs in Zamojcin and Bernardi (2013); = 0 otherwise
- TRAINING = 1 if a doctoral program offers formal teaching training; 0 otherwise

The correlation statistics among the regression variables are provided in Table 4. The two ranking measures used in this study have a significant correlation of 0.52793. It further reinforces the robustness of our results. GENERAL_RESEARCH and EDU_RESEARCH carry an insignificant correlation of -0.12127, which suggests that education research and general research in the field of accounting are separate areas, and that different schools tend to develop their own areas of expertise.

<table>
<thead>
<tr>
<th></th>
<th>AVERAGE_RANKING</th>
<th>HISTORY</th>
<th>SIZE</th>
<th>STUDENT</th>
<th>GENERAL_RESEARCH</th>
<th>ED_RESEARCH</th>
<th>TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEIGHTED_RANKING</td>
<td>0.52793</td>
<td>0.24586</td>
<td>0.22222</td>
<td>0.19403</td>
<td>0.07799</td>
<td>0.01014</td>
<td>0.20023</td>
</tr>
<tr>
<td>AVERAGE_RANKING</td>
<td>0.24117</td>
<td>0.31241</td>
<td>0.28538</td>
<td>0.15572</td>
<td>0.23687</td>
<td>0.21761</td>
<td></td>
</tr>
<tr>
<td>HISTORY</td>
<td>0.24117</td>
<td>0.31241</td>
<td>0.28538</td>
<td>0.15572</td>
<td>-0.21535</td>
<td>-0.11532</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.59971</td>
<td>0.14462</td>
<td>0.33389</td>
<td>-0.00424</td>
<td>-0.21535</td>
<td>-0.09684</td>
<td></td>
</tr>
<tr>
<td>STUDENT</td>
<td>0.83935</td>
<td>0.36902</td>
<td>-0.21535</td>
<td>0.11007</td>
<td>-0.11532</td>
<td>0.10576</td>
<td></td>
</tr>
<tr>
<td>GENERAL_RESEARCH</td>
<td>0.83935</td>
<td>0.36902</td>
<td>-0.21535</td>
<td>0.11007</td>
<td>-0.11532</td>
<td>0.10576</td>
<td></td>
</tr>
<tr>
<td>ED_RESEARCH</td>
<td>-0.12127</td>
<td>-0.09905</td>
<td>0.22102</td>
<td>0.22102</td>
<td>0.22102</td>
<td>0.22102</td>
<td></td>
</tr>
</tbody>
</table>
Regression results for the second research objective are reported in Table 5. Using WEIGHTED_RANKING as the dependent variable, STUDENT is significant at 5%, level whereas TRAINING is significant in both model specifications. Using AVERAGE_RANKING as the dependent variable, SIZE and STUDENT are significant at the 5% level. GENERAL_RESEARCH and EDU_RESEARCH are both significant ranging from 5% to 1% levels. TRAINING is also significant at 5% in both model specifications using AVERAGE_RANKING as the dependent variable. Overall, the results from the regression analysis show that the teaching ranking is mildly associated with program size and average size of the doctoral programs. There is also weak evidence that general accounting research and accounting education research rankings of the doctoral programs are associated with the teaching effectiveness of their graduates. The presence of teaching training is consistently associated with the teaching rankings in Table 5. This highlights the importance of providing formal teaching training to doctoral students in the form of teaching courses and seminars, in addition to less formal means such as assigning faculty members to supervise classes being taught by doctoral students. The findings of this study echo the call by the AACSB for putting more emphasis on training accounting doctoral students to become effective instructors and not just productive researchers.

Table 5: Results of Regression Analysis (n = 75)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>WEIGHTED_RANKING</th>
<th>AVERAGE_RANKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERCEPT</td>
<td>17.3849**</td>
<td>12.3570</td>
</tr>
<tr>
<td>HISTORY</td>
<td>0.2360</td>
<td>0.1862</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.0481</td>
<td>0.0807**</td>
</tr>
<tr>
<td>STUDENT</td>
<td>5.3069**</td>
<td>6.3559**</td>
</tr>
<tr>
<td>GENERAL_RESEARCH</td>
<td>-0.0546</td>
<td>2.6240</td>
</tr>
<tr>
<td>ED_RESEARCH</td>
<td>0.2186</td>
<td>11.2178**</td>
</tr>
<tr>
<td>TRAINING</td>
<td>10.5960**</td>
<td>9.7314**</td>
</tr>
<tr>
<td>F-statistic</td>
<td>1.94*</td>
<td>3.98***</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.0597</td>
<td>0.1675</td>
</tr>
</tbody>
</table>

***, **, * significant at the 1%, 5%, and 10% level, respectively

CONCLUSIONS

This study provides a ranking of 75 U.S. accounting doctoral programs based on student ratings in RMP for 822 of their doctoral graduates. This ranking is based on student perceptions of teaching effectiveness. The ranking in this study is only mildly correlated with previous rankings of accounting doctoral programs based on the amount of research output of the graduates. This finding highlights the importance of evaluating accounting doctoral programs based on multiple dimensions, including research and teaching activities. Besides, we find that doctoral programs with formal teaching training have higher rankings based on RMP ratings. Overall, our results support the initiative by the AACSB to put more emphasis on teaching accounting doctoral students to be effective in the classroom, and not just to be productive researchers. Most accounting doctoral programs require at least 4-5 years of full-time enrollment for the completion of the doctoral degree. There is really no valid reason as to why formal teaching training is not being included in the program. We can’t assume that doctoral students can just learn how to teach by teaching one or two classes on their own or under the supervision of their advisors. Just like research skills, teaching skills also require training in formal course setting.

There are limitations in this study which can provide potential refinements and extensions for future studies. First, the RMP rating is a measure of student perception of teaching effectiveness and not a direct measure of teaching effectiveness. Second, the findings in this study are subject to the
measurement errors and biases associated with student ratings in general and online voluntary rating system in particular. Third, the ranking represents a snapshot of the programs in the past since we rely on archival data. The current study represents an expository study using RMP data. Future studies can explore better and direct measures of teaching effectiveness in the evaluation of accounting doctoral programs and the effects of doctoral program curriculum on the teaching effectiveness of the doctoral graduates. Future studies can also re-examine the ranking of doctoral programs and change in student perception of teaching effectiveness when formal teaching training becomes a more common practice among doctoral programs.

REFERENCES


Ranking of Accounting Doctoral Programs


BIOGRAPHIES

Kam C. Chan is a Distinguished Professor of Accounting at Pace University. He received his Ph.D. with a major in accounting and a minor in finance from the University of South Carolina. He joined Pace in 1997 and has received department and school teaching awards as well as Pace’s Kenan Award for Teaching Excellence in 2014. Dr. Chan has published in premier research journals such as Accounting, Organizations, and Society; Auditing: A Journal of Practice and Theory; Journal of Accounting and Economics; Journal of Business Finance and Accounting; and Journal of International Accounting Research. His research has been abstracted, reprinted, and highly cited by others. He was the Ernst and Young Scholar at Pace in 2000-3 and 2009-15. He was ranked as one of the top accounting researchers in reports published by the American Accounting Association. Dr. Chan takes an active role in providing various services to the Pace and academic communities and has received the Outstanding Reviewer Award from the Emerald Literati Network in 2016.

Barbara R. Farrell is a Professor of Accounting at Pace University. She is a CPA who has spent time in both Big 8 public accounting and in private industry as a Chief Audit Executive. Professor Farrell began teaching at Pace University in 1980 as an adjunct professor, and as a full-time professor in 1984. Professor Farrell’s interests are in auditing, accounting information systems, forensic accounting, and internal auditing. She teaches both in face-to-face classes and online. She received Pace’s Kenan Award of Teaching Excellence in 2011. She is a member of the Audit Committee of the Board of Trustees at Pace and a member of the Board of Trustees of Academic Federal Credit Union. She also chairs the annual campaign to raise a significant amount of donations for student scholarships. Dr. Farrell has published papers in the areas of online learning, financial statement fraud, auditor responsibilities, and Sarbanes Oxley Act. She has published in many journals such as Auditing: A Journal of Practice and Theory and CPA Journal.

Patricia Healy is an Associate Professor of Accounting and the Undergraduate Program Chair for the Accounting Department. Professor Healy is a CPA and CMA and she is an active member of the AICPA, AAA, and IMA. She serves on the Accounting Advisory Board for Westchester Community College. She joined the Lubin Schools of Business in 1977. Her teaching interests include managerial accounting, cost accounting, advanced accounting, and international accounting. Professor Healy was recognized as an outstanding teacher with the Kenan Teaching Award and for her strong service to Lubin with the Accounting Department Service award. Professor Healy has published papers on international auditing standards, managing quality control costs, diversity issues in business, implementing the Balanced Scorecard and governmental accounting issues. She has made presentation at the AIS Educators Association, EY Thought Center, AAA Annual and Regional Meetings, IMA Annual Meeting, and the Advances in Management Accounting Conference.
Annie Wong earned a B.B.A. degree in Management from the Shue Yan College in Hong Kong, an M.B.A. degree from the University of Alabama, and a Ph.D. degree in Finance from the State University of New York at Buffalo. Dr. Wong is currently Chair and Professor of the Department of Finance at the Ancell School of Business at Western Connecticut State University. She had taught various undergraduate and MBA corporate finance courses with extensive applications of computer technology. She has specific research expertise in the area of rate regulation for public utilities where her work has been cited in numerous State court proceedings and by Canadian organizations since its publication in 1994. She has published in journals such as *International Journal of Finance*, *Journal of Multinational Finance Management*, *Managerial Finance*, and *Review of Accounting and Finance*. Dr. Wong received the Outstanding Faculty Member Award in the Ancell School of Business in 2008.