

# Employer Perceptions of Online Accounting Degrees

Amanda M. Grossman

Leigh R. Johnson

Murray State University

**ABSTRACT:** This study expands upon the current literature regarding how potential employers perceive the value of online accounting education at both the undergraduate and graduate level. Experimental results demonstrate that employers are significantly more willing to offer employment to an entry-level job applicant whose baccalaureate degree in accounting, from an AACSB-accredited institution, was obtained in a traditional (on campus) or hybrid (blended learning) environment as opposed to an online environment. The reputation of the educational institution as suggested by publication ratings does not significantly affect willingness to hire. Further results suggest that Big 4 employers are equally willing to hire the online accounting graduate as employers from most other types of firms. In addition, employers appear to be more accepting of lower-level, as opposed to upper-level, online accounting coursework and favor applicants who complete a baccalaureate degree on campus and an M.B.A. online, or *vice versa*, over those who complete both degrees online. Practitioners and students should be aware that, within the aforementioned boundaries, accounting firms are becoming more willing to hire accounting graduates whose academic career includes some online content.

**Keywords:** online education; accounting degrees; employer perceptions; Big 4.

**Data Availability:** Available upon request.

## INTRODUCTION

Higher education is currently experiencing online student enrollments that are vastly outpacing the overall student enrollment growth rate in traditional on-campus courses (Allen and Seaman 2011). Symbiotically, higher education administrators are increasingly viewing online learning as a critical component of their university's long-term strategy to attract and retain students (Allen and Seaman 2013) and as a means to decrease costs and achieve economies of scale (Wright 2014). Almost all public institutions now have online course offerings (Allen and Seaman 2014), and over 150 institutions accredited by the Association to Advance Collegiate Schools of Business offer an online business degree (AACSB 2014). In the field of accounting, an increasing number of institutions are offering at least some online courses, with certain institutions offering entire accounting degrees, both at the baccalaureate and master's level, completely online (Ng 2011).

Given the rapid evolution in the delivery methods of accounting education, the perceived value of online learning to potential future employers warrants investigation. The delivery method, or educational environment, in which a student learns should be considered alongside other well-known factors in the hiring decision, such as academic achievement, professional conduct, potential to advance, communication skills, maturity, ethicality, etc. (Ahadiat and Smith 1994). The purpose of the current study is to examine the impact of the following on employers' willingness to hire a graduate of an AACSB-accredited institution: educational environment, institutional reputation, employer type, undergraduate coursework mix, and graduate coursework mix.

One goal of the study is to examine whether the findings produced by survey data regarding employer perceptions of online accounting education are consistent with those experimentally examining employers' judgments. To accomplish this goal, the study experimentally manipulates a between-subjects variable, educational environment, with three levels: traditional (on campus), hybrid (blended learning), or online, to examine potential employers' willingness to hire a job applicant with an

---

The authors thank the participants of the 2013 AAA Southeast Region Meeting, as well as the participants of the 2013 Annual Kentucky Accounting Educator's Conference, for their comments and suggestions. We also thank Ms. Beth Sloan for her contribution to the experimental instruments used in this research study.

Editor's note: Accepted by Lori Holder-Webb.

Submitted: October 2013  
Accepted: July 2015  
Published Online: July 2015

accounting baccalaureate degree. Following prior survey-based research (e.g., [Kohlmeyer, Seese, and Sincich 2011](#); [Jeancola 2011](#); [Tabatabaei, Solomon, Strickland, and Metrejean 2014](#)), it was expected that potential employers would favor job applicants who completed their degree in either the traditional or hybrid educational environment as opposed to an online environment. Although experimental results provide support for this expectation, participant responses reinforce the trend toward greater acceptance of online accounting education.

While prior research demonstrates that AACSB accreditation provides one measurement of an institution's reputation (e.g., [Hardin and Stocks 1995](#); [Kohlmeyer et al. 2011](#)), the present study examines whether an additional distinguishing factor, beyond AACSB accreditation, impacts an employer's willingness to hire the online graduate. Since business school rankings in national publications are viewed as significant signals of reputation and are heavily utilized by recruiters ([Peters 2007](#)), another experimentally manipulated variable, institutional reputation, is designed with two levels: highly rated or unrated. Although it was expected that employers would favor job applicants who completed their degree at a highly rated educational institution (e.g., [Zell 2001](#); [Clarke 2007](#)), we find no support for this expectation.

Different types of employers are known to favor certain job applicant attributes. For example, [Ahadiat and Smith \(1994\)](#) report that national CPA firms value a potential employee's interest in advancement and leadership qualities more so than regional CPA firms, or certain employers in industry. Therefore, another goal of the study is to consider whether educational environment impacts the decision-making processes of Big 4 employers. Given that Big 4 employers place a higher value on certain attributes more commonly associated with traditional education than other employers ([Lewis, Shimerda, and Graham 1983](#); [Schmutte 1998](#)), it was expected that Big 4 employers would be less inclined to hire online graduates than employers from non-Big 4 firms. Contrary to expectations, we find that Big 4 employers are just as willing to hire online accounting graduates as most other types of employers (except for international employers, who appear less willing).

The final goal of the study is to investigate how various mixtures of on-campus and online coursework, both at the undergraduate and graduate level, may affect employers' willingness to hire. In one within-subjects variation, potential employers rated their willingness to hire based upon whether the lower-level (or upper-level) accounting coursework was completed on campus (or online). In another within-subjects variation, the applicant obtained an M.B.A. degree (either on campus or online), in addition to a baccalaureate degree (either on campus or online). As expected (e.g., [Jeancola 2011](#)), potential employers are more willing to hire a job applicant with an undergraduate degree consisting of lower-level accounting coursework completed online and upper-level accounting coursework completed on campus, as opposed to *vice versa*. Also, as expected ([Lamer 2008](#); [Bailey and Flegle 2012](#)), potential employers are less willing to extend an offer of employment when the applicant completes both the baccalaureate degree and the M.B.A. degree online.

The present study advances the existing literature in several ways. First, the study expands upon prior findings (e.g., [Kohlmeyer et al. 2011](#); [Jeancola 2011](#); [Tabatabaei et al. 2014](#)) by incorporating an experimental design with a blended learning component (the hybrid condition). Second, the consideration of institutional reputation, through publication ratings, is advanced from discerning employer preferences between only AACSB-accredited and non-AACSB-accredited institutions. Third, the present study expands upon prior literature that delineates certain job applicant characteristics desired most by certain types of employers. Specifically, educational environment is considered as a factor in the hiring decision of Big 4 employers. Finally, this study parses out the acceptability of online accounting coursework at different points in an accounting student's academic career; in other words, the effects on the willingness to hire job applicants with online education in lower-level accounting courses, upper-level accounting courses, and at the graduate level are examined in detail.

The remainder of this study proceeds as follows. The second section discusses findings within previous literature with regard to employment of the online student and develops the study hypotheses. The third section reviews the methodology of the study, including a description of the experimental instrument utilized. The fourth section presents both the main study results and the results of additional analyses. Finally, the last section discusses the general conclusions of the study and presents several study limitations and possible future research endeavors.

## HYPOTHESES DEVELOPMENT

### Educational Environment

Demand for accounting graduates has increased over the last few years, especially for those with Master's degrees, which may be driven in part by the 150-hour rule for CPA licensure (American Institute of Certified Public Accountants [AICPA] 2013). Public accounting firms need employees who are both technologically sophisticated and capable of making business decisions to address the increased regulatory and compliance requirements that their clients face ([Baysden 2013](#)).

Simultaneously, limited classroom space has forced some universities to deny admission to otherwise qualified applicants (AICPA 2013). As over 150 colleges and universities, of which at least 30 are AACSB-accredited, offer online accounting programs to reach these students (SR Education Group 2015), recruiters may consider online graduates to meet the employment needs of their organization.

Across all academic disciplines, research examines how potential employers perceive the saliency of online degrees when engaged in hiring decisions. Certain employers have demonstrated an increased acceptance of online coursework (Metrejean and Noland 2011; Tabatabaei and Gardiner 2012) given that such environments require higher self-efficacy and self-regulation from students (e.g., Bryant, Kahle, and Schafer 2005). However, other employers are generally indifferent or less willing to hire a job applicant with an online degree (Adams and DeFleur 2005, 2006, 2007; Linardopoulos 2012) due to concerns with academic quality and rigor, insufficient face-to-face interactions, lack of student commitment (Adams 2008; Columbaro and Monaghan 2009), and general unfamiliarity with online education (Kohlmeyer et al. 2011), among others.

Disinclination to hire online graduates at the baccalaureate level is readily apparent within the accounting profession. In her dissertation, Jeancola (2011) finds that CPAs, as potential employers, overwhelmingly favor a job candidate who obtained a traditional on-campus degree, as opposed to a degree either completely, or partially, online. Similarly, exploratory studies by Kohlmeyer et al. (2011) and Tabatabaei et al. (2014) find that, overall, accounting professionals strongly prefer to offer employment to a traditional accounting graduate, as opposed to an online graduate. Based upon the research cited above, the following hypothesis is presented:

**H1:** Employers will be more willing to extend an offer of employment to a job applicant whose accounting education was obtained via a traditional or hybrid environment, as opposed to an online environment.

### **Institutional Reputation**

Past research examines a number of factors, in addition to the course delivery method, that may promote or reduce a potential employer's willingness to hire an online accounting graduate. One such factor is the reputation of the academic institution from which the job applicant earned the degree. Of chief concern is the preponderance of so-called "diploma mills," whose course content and rigor are generally perceived as substandard (Carnevale 2007; Lamer 2008; Webley 2012). According to Kohlmeyer et al. (2011), a crucial factor in the hesitancy of hiring the online student is the perceived inferior reputation of online institutions. Their research also demonstrates that if the recruiter is familiar with the institution from which an online student graduated, then the recruiter is more apt to place the academic rigor of the institution's online instruction on par with that of its traditional on-campus instruction.

The present study examines whether the perception that online programs are of lower quality than traditional programs is relevant for otherwise reputable (i.e., accredited) educational institutions. Accreditation signals an institution's dedication to high-quality instruction (Hardin and Stocks 1995; Kyle and Festervand 2005; Wellen 2006) and may be viewed more positively than a degree from a non-accredited institution (Adams and DeFleur 2006; Zammuto 2008; Eastman, Bocchi, and Ryzdewski 2013) or an institution that receives accreditation from suspect sources (DeFleur and Adams 2004). In fact, some employers indicate that if a degree is obtained from a reputable, accredited institution, then the mode of delivery format is inconsequential (Wellen 2006; Carnevale 2007; Lamer 2008).

Research indicates that certain employers utilize institutional rankings as a measure of academic quality to determine the institutions at which they will recruit (Zell 2001; Clarke 2007; Peters 2007). The use of such measures is especially true with business school graduates, where a higher institutional rank is positively correlated with employment opportunities at certain companies and higher salaries (Rindova, Williamson, and Petkova 2005; Clarke 2007). Based on these past findings, it is reasonable to expect that an institution's reputation may significantly affect a potential employer's inclination to hire. This leads to the second hypothesis:

**H2:** Employers will be more willing to extend an offer of employment to a job applicant whose accounting education was obtained via a highly rated institution as opposed to an unrated institution.

### **Employer Type**

Employment opportunities for online graduates may also vary among size and/or types of employers, as Big 4 accounting firms, smaller CPA firms, and private industry often emphasize the use of different criteria to evaluate prospective employees (Lewis et al. 1983; Pasewark, Strawser, and Wilkerson 1988; Ahadiat and Smith 1994; Hardin and Stocks 1995) and as demand may drive recruiters to look for graduates from online programs (AICPA 2013). For example, Ahadiat and Smith (1994) find that academic achievement (i.e., grades, awards, scholarships) and advancement potential (i.e., willingness for

advancement, future potential, ability or drive for supervision or leadership) are significantly more important to large, national accounting firms than to other employers.

Further, Big 4 firms do not value prior work experience as highly as large corporations (Lewis et al. 1983) or smaller CPA firms (Cook and Finch 1994). Accordingly, as online students often have work experience and are viewed as self-starters (Columbaro and Monaghan 2009; Grossman and Johnson 2013), indicating the potential to train themselves, non-Big 4 firms may be more willing than Big 4 firms to hire online accounting graduates.

Conversely, Big 4 firms place greater importance on leadership roles in student professional and social organizations than large corporations (Lewis et al. 1983) and smaller CPA firms (Schmutte 1998). As such, the Big 4 target the best students as early as their freshman year and use on-campus activities such as career fairs, social events, and accounting organization meetings to evaluate criteria other than technical competence, such as leadership potential, professional appearance, and soft skills. Observations at campus events, along with faculty recommendations, enable these firms to narrow the primary recruitment pool (Owens-Jackson, Highsmith-Quick, and Robinson 2013). Since these events and leadership opportunities are aimed toward traditional students, Big 4 recruitment practices may indicate a stronger preference for on-campus education than those of non-Big 4 employers. Thus, the following hypothesis is presented:

**H3:** Big 4 employers will be less willing than non-Big 4 employers to extend an offer of employment to a job applicant whose accounting education was obtained in an online environment.

### Undergraduate Coursework Mix

While past research demonstrates that employers generally favor applicants with traditional, face-to-face degrees, it is less clear how employers may perceive an undergraduate degree comprised of both traditional and online coursework. Given that one-third of all higher education students now take at least one online course (Allen and Seaman 2014), the likelihood that employers will interview candidates with a mix of traditional and online coursework increases every year.

Acceptability of mixed coursework may depend on the course level of the classes completed online (Watters and Robertson 2009). Open response comments to the Adams (2008) study indicate that online education is perceived as more effective at the undergraduate level than at the graduate level where subject matter becomes more complex. Although the participants in the Adams study did not distinguish between lower-level and upper-level undergraduate courses, Chen, Jones, and Moreland (2013) find that while lower-level undergraduate accounting courses, such as principles of accounting, can be effectively delivered in an online environment, outcomes for advanced-level undergraduate accounting courses are more favorable in a traditional educational environment. For example, when participants in the Jeancola (2011) study were asked a question regarding the acceptability of an applicant with mixed online and traditional accounting coursework, participants indicated that the acceptance of mixed credentials is limited to situations where lower-level coursework is completed online and upper-level coursework is completed in a traditional environment. Accordingly, the following hypothesis is posited:

**H4:** Within any educational environment, employers will be more willing to extend an offer of employment to a job applicant who completed lower-level accounting coursework online and upper-level accounting coursework on campus, as opposed to *vice versa*.

### Graduate Coursework Mix

Employers may also receive applications from individuals with a traditional undergraduate degree and an online master's degree, or *vice versa*. While current research has examined the M.B.A. students' perception of their own degrees (e.g., Bruce 2010), the increased interest in hiring an M.B.A. graduate (AICPA 2013; Graduate Management Admission Council [GMAC] 2013), and the long-term benefits of obtaining an M.B.A. degree (e.g., Herrington 2010), little research has examined any perceived preferences on the part of the employer with respect to a job applicant obtaining the degree online or not. The present study jointly examines the impact of an M.B.A. degree as well as the educational environment in which an M.B.A. degree was obtained on an employer's willingness to hire.

Some studies imply that online M.B.A. degrees from accredited institutions are gaining acceptance among employers, noting that a majority of study participants consider an online and traditional M.B.A. of equal value (Lamer 2008; Bailey and Flegle 2012). Although not focused on online M.B.A.s, another study by Metrejean and Noland (2011) finds that employers do not perceive a difference between a traditional or online Master's of Accountancy. Notwithstanding the apparent growing acceptability of online Master's degrees in business fields or that skills obtained

in advanced degrees are not typically required of entry-level staff (e.g., Guinn, Bhamornsiri, and Blanthorne 2004), open-response comments from the Adams and DeFleur (2006) study suggest that prospective employees with a mix of online and traditional coursework are still more acceptable than those with only online coursework. These observations infer that while employers may find only a baccalaureate degree acceptable, they may prefer the additional attainment of a graduate degree—but only if both degrees are not online. The implications of these studies lead to the following hypothesis:

**H5:** Within any educational environment, employers will be more willing to extend an offer of employment to a job applicant who obtained either an M.B.A. or a baccalaureate online as opposed to obtaining both degrees online.

## METHOD

### Participants

Since we conducted this study online, we used several methods to obtain email addresses of potential participants, especially those employed by Big 4 firms. One method involved contacting accounting alumni of a major southern university. Another method involved collecting CPA email addresses via public and private databases. Although 321 participants opened the survey, only 254 completed the survey in its entirety. The average age of survey participants is 32 years, and 51 percent are male. Participants identified themselves as partners (28), senior managers or managers (89), seniors (62), staff members (32), or self-reported another designation, such as controller, human resource director, CFO, or president (41). Eighty-six percent of participants are either CPAs, have an additional certification, or have only another certification, such as a CMA or CGM. Table 1 presents participant and organizational characteristics.

The majority of survey participants are employed in the state of Texas (163). Of the additional 87 participants, 31 are employed in the state of Tennessee, and 1 to 7 participants are employed across 19 other states.<sup>1</sup> Participants indicated that they are employed by one of the following organizational types: local (30), regional (29), national (48), international (49), or Big 4 (94). The vast majority of participants are employed by either public accounting firms (128) or industry firms (85). The additional 39 participants are employed in private practice, government, education, or in some other self-identified capacity. Non-significant Chi-square tests indicate that effective randomization was achieved among the six treatment conditions with respect to the following participant demographics: gender, job title, state of employment (Texas or otherwise), area of employment (public accounting or otherwise), and type of firm (Big 4 or otherwise).

### Experimental Instrument

We administered the experiment using an online survey instrument designed in SurveyMonkey<sup>®</sup>, a platform that is acquiring growing visibility as a viable means of experimental data collection (Brandon, Long, Loraas, Mueller-Phillips, and Vansant 2014). An invitation email briefly introduced the researchers, explained the purpose of the study, provided information regarding privacy concerns, and provided a hyperlink to begin the online survey. The survey was divided into three parts, described below. Figure 1 provides a generalized description of the survey process.

### Online Survey Part 1

In Part 1, participants are asked to assume that their firm or organization is currently looking to fill a position for an entry-level staff accountant and that they are responsible for the final decision regarding whether to extend an offer of employment. The instrument focuses on five factors accounting recruiters consider important in the hiring decision: degree earned, work experience, extra-curricular activities, recommendations, and the preliminary interview (Lewis et al. 1983). Specifically, the applicant had completed 150 credit hours (to be eligible to obtain a CPA license), attended an AACSB-accredited university, earned a baccalaureate degree with a concentration in accounting, and graduated in the top 5 percent of the class. Additional information including limited work experience, community involvement, and favorable recommendations and preliminary interview are provided. These factors are held constant for all survey instrument versions.

<sup>1</sup> An analysis of variance with three independent variables: educational environment (traditional, hybrid, online), institutional reputation (highly rated or unrated), and state (Texas or other), demonstrates that those participants employed in the state of Texas did not foster any significant statistical differences in willingness to offer employment than those participants employed in other states ( $F[1, 238] = 0.357, p = 0.551$ ). No interaction effects were produced.

**TABLE 1**  
**Summary of Study Participant and Organizational Characteristics**

**Panel A: Participant Characteristics**

	<u>Count</u>	<u>Percent</u>
Gender		
Male	130	51%
Female	121	48%
No response	3	1%
Total	254	100%
Age		
Average	32	
Range	22–61	
Title		
Partner	28	11%
Manager	89	35%
Senior	62	25%
Staff	32	13%
Other (Self-Identified)	41	15%
No response	2	1%
Total	254	100%
Certifications		
CPA only	193	76%
CPA and additional certification	18	7%
Other certification only	7	3%
None or no response	36	14%
Total	254	100%
Highest Level of Education		
Baccalaureate Degree	27	11%
Graduate Degree	219	85%
Advanced Degree	4	2%
No response	4	2%
Total	254	100%
State of Employment		
Texas	163	64%
Other than Texas	87	34%
No response	4	2%
Total	254	100%

**Panel B: Organizational Characteristics**

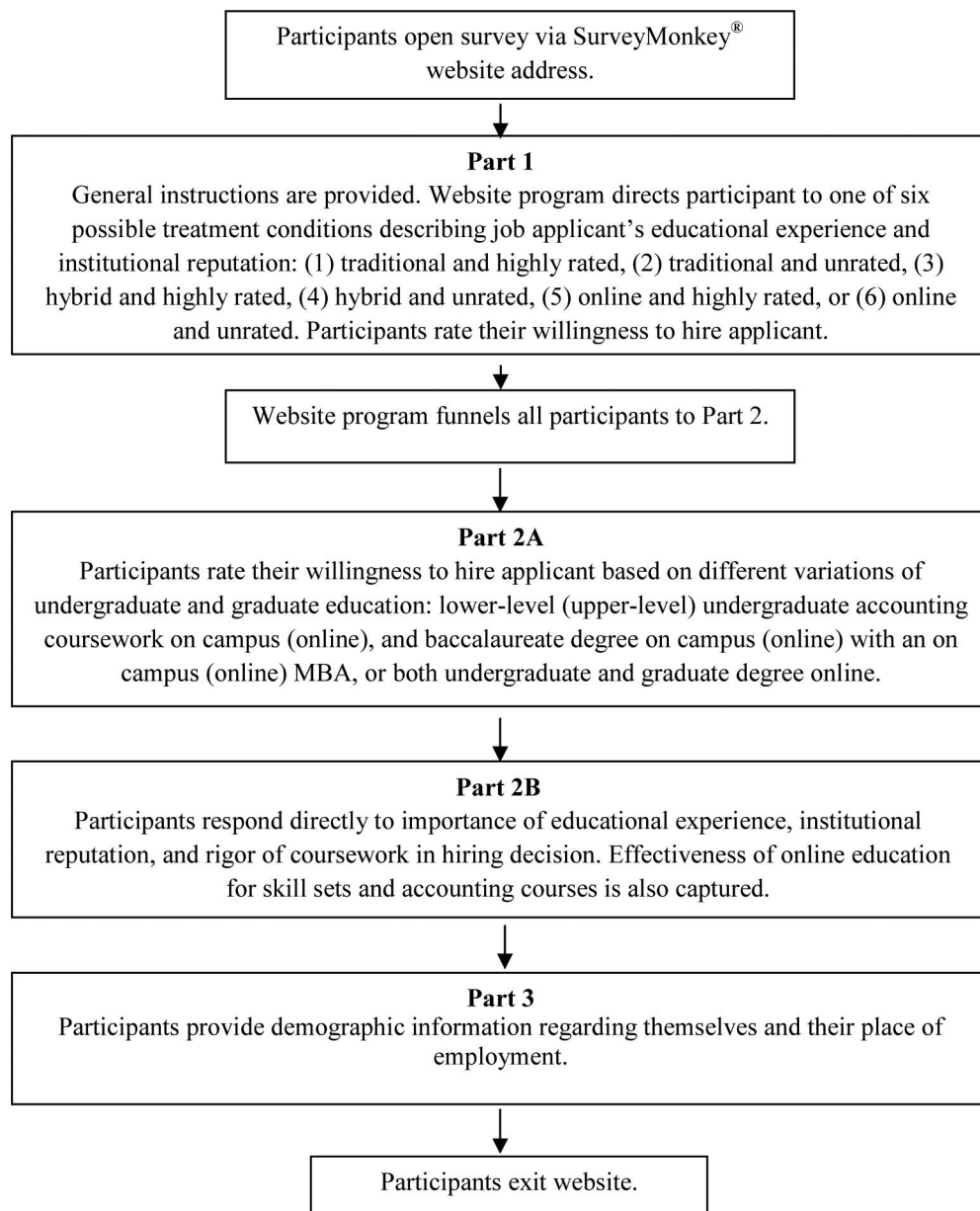
	<u>Count</u>	<u>Percent</u>
Area of Practice		
Public	128	50%
Industry	85	34%
Private/Government/Education	15	6%
Other (Self-Identified)	24	9%
No response	2	1%
Total	254	100%
Type of Practice		
Local	30	11%
Regional	29	12%
National	48	19%

*(continued on next page)*

**TABLE 1 (continued)**

	<u>Count</u>	<u>Percent</u>
International	49	19%
Big 4	94	37%
No response	4	2%
Total	254	100%

**FIGURE 1**  
**Generalized Description of the Phases of the Online Survey**



We vary two additional factors of potential importance to employers: educational environment and institutional reputation. Educational environment is manipulated on three levels. In the traditional environment condition (representing the control group), lectures and course materials, as well as exams, are delivered and administered on campus. In the hybrid environment condition, lectures and materials are delivered online, but exams are administered on campus.<sup>2</sup> Finally, in the online environment condition, lectures and materials, as well as exams, are delivered and administered online.<sup>3</sup> Institutional reputation is manipulated on two levels. In the highly rated condition, the job applicant's degree was obtained from an educational institution that is rated in the first quartile of business schools by national ranking publications. In the unrated condition, the job applicant's degree was obtained at an institution that is unrated by national ranking publications.<sup>4</sup>

The online survey program randomly assigned each participant to one of six possible treatment conditions—a traditional environment at a highly rated institution, a traditional environment at an unrated institution, a hybrid environment at a highly rated institution, a hybrid environment at an unrated institution, an online environment at a highly rated institution, or an online environment at an unrated institution. Study participants were presented with the following question: How willing would you be to extend an offer of employment to the applicant? Participants responded by choosing a number from 1 (not at all willing) to 7 (extremely willing).

### **Online Survey Part 2**

Part 2 was divided into two short sections, A and B. Hereafter, all participants were presented identical information and responded to identical questions. In Section A, participants were asked to assume that the information provided in Part 1 remained the same, except for five forthcoming variations. In the first variation, the applicant's lower-level accounting coursework was completed on campus, but the applicant's upper-level accounting coursework was completed online. In the second variation, the applicant's lower-level accounting coursework was completed online, but the applicant's upper-level accounting coursework was completed on campus.

The last three variations introduce the applicant's completion of a Master's degree. In the third variation, the applicant's 150 hours consisted of a 120-hour baccalaureate degree and a 30-hour M.B.A., the former of which was obtained on campus and the latter of which was obtained online. In the fourth variation, the applicant's baccalaureate degree was obtained online and the M.B.A. was obtained on campus. Finally, in the fifth variation, both the baccalaureate degree and the M.B.A. were obtained online. For each of these five variations, participants were asked to rate their willingness to extend an offer of employment based upon the same scale used in Part 1.

In Section B, participants responded to general questions regarding their opinions on educational factors that may affect the decision to extend an offer of employment. On a scale from 1 (not at all important) to 7 (extremely important), participants were asked to rate the nature of a job applicant's educational environment as well as the reputation of a job applicant's educational institution. The third question asked participants how important the educational environment would be if the applicant had passed all four parts of the CPA exam. The fourth and fifth questions asked participants to rate their perception of the academic rigor of both the traditional educational environment and the online educational environment on a scale from 1 (not at all rigorous) to 7 (extremely rigorous).

The remaining questions in Section B were included to obtain participants' general perceptions of the effectiveness of the three types of educational environments in the development of skills and the effectiveness of teaching particular courses in the accounting curriculum online. Upon indicating the educational environment of the original applicant,<sup>5</sup> participants determined, on a scale from 1 (highly ineffective) to 7 (highly effective), how effective that environment would be in providing: technical skills, oral skills, written communication skills, team-building skills, and interpersonal skills. Next, the same scale was used to gauge the participants' perception of the teaching effectiveness of the online educational environment for the following accounting courses: principles, intermediate, cost, tax, information systems, audit, and advanced. The final

<sup>2</sup> The term "hybrid" has had many different definitions, depending upon the research conducted. In this study, the definition of a hybrid learning environment is purposefully kept simple, so as not to misconstrue any findings that may be obtained based upon study participants' potential misinterpretation of what is meant by the term.

<sup>3</sup> Research indicates that students with otherwise similar backgrounds may decide to take on-campus, hybrid, or online courses for a variety of reasons, including, among others, convenience, flexibility, and their personal technical sophistication (Palloff and Pratt 2003; Mayadas, Bourne, and Bacsich 2009; Wright 2014).

<sup>4</sup> An alternative manipulation of lower reputation could be another rated institution, perhaps in the fourth quartile of business publications. However, an unrated manipulation was chosen to mitigate the possibility that participants perceive any rating as more indicative of higher reputation.

<sup>5</sup> This indication was made to provide a reliable point of reference as some participants may not have accurately recalled the educational environment of the original applicant. An analysis of the participants who responded to this recall question correctly was compared to the analysis of total study participants. No significant differences in study results are obtained between these two groups.



prompt in Part 2 asked participants to provide any comments or clarifications with regard to their perceptions of online accounting education.

### Online Survey Part 3

Part 3 of the survey asked study participants to provide demographic information. First, participants were directed to provide information regarding their firms or organizations, including their state of employment, the organizational type, and the type of area in which the participant practices. Additional demographic descriptors, including age, gender, highest level of education, job title,<sup>6</sup> and types of professional certifications were captured. Further questions included the number of hours of undergraduate and graduate accounting courses the participants had taken online, and how often their opinions were solicited in the recruiting process.<sup>7</sup>

## RESULTS

The descriptive statistics on the dependent variable, willingness to offer employment, are broken down by educational environment as presented in Table 2. Tables 3 and 4 highlight the significant mean differences on the dependent variable across educational environment and within educational environment, respectively. The combined means decrease across each level of educational environment from 6.06 (traditional) to 5.23 (online), with only the traditional and hybrid means insignificantly different, consistent with expectations for the first hypothesis. Although the mean values moving from an unrated to a highly rated institution are directionally as hypothesized, the differences are insignificant for all levels of educational environment. The means for Big 4 are also directionally indicative that these firms are more willing to hire across all levels of educational environment, contrary to expectations. Finally, in examining the within-subjects means, it appears that the willingness to hire drops precipitously for those job applicants whose educational environment was entirely online—either at the undergraduate or graduate level, providing some initial support for the last two hypotheses.

### Hypotheses 1 and 2

H1 purports that employers would be more willing to hire graduates with degrees from a traditional or hybrid educational environment, as opposed to those with degrees from an online environment. To assess this claim, a 3 (educational environment)  $\times$  2 (institutional reputation) factorial ANOVA was conducted. Statistical results indicate that a main effect is obtained for educational environment ( $F[2, 248] = 12.213, p = 0.000$ ), but not for institutional reputation ( $F[1, 248] = 2.290, p = 0.131$ ). No interaction effect is present ( $F[2, 248] = 0.263, p = 0.769$ ). Table 5, Panel A provides the results of the analyses for the first two hypotheses.

To further examine the ANOVA result, main effect contrast tests were conducted among each level of educational environment (see Table 5, Panel A). Results indicate that a participant's willingness to offer employment is significantly greater in either a traditional (mean = 6.06) or hybrid (mean = 5.83) environment as opposed to an online (mean = 5.23) environment ( $t[251] = -4.839, p = 0.000$ ). An additional contrast test finds that willingness to offer employment does not differ significantly between the traditional treatment condition and the hybrid treatment condition ( $t[251] = -1.220, p = 0.224$ ). Overall, these results provide support for the first hypothesis.

The structure of the hybrid definition in the experiment may lend credence to the notion that employers perceive, and value, the higher level of academic integrity achieved through monitored exams. These results are also commensurate with the recently documented trend of increased employer acceptance of online degrees. Whereas data from a few years ago suggest that employers are at best indifferent to offering employment to the online graduate (e.g., [Kohlmeyer et al. 2011](#)); more recent data suggest that employer perceptions have moved significantly away from only indifference toward increased acceptance of a

<sup>6</sup> The only dependent measure on which a significant difference is detected with respect to participant job title is the importance of the educational environment of a potential job applicant once all parts of the CPA exam were passed ( $F[4, 251] = 4.313, p = 0.002$ ). The ratings by each category are as follows: partners (4.36), managers (4.31), seniors (3.63), staff members (3.35), and other title (3.89). A Bonferroni *post hoc* analysis further confirms that while the opinions of partners and managers are insignificantly different, both are significantly different from the opinion of staff members (and the opinion of partners alone is significantly different than that of seniors). Such results communicate a possible generational disconnect, as more seasoned potential employers remain somewhat concerned with the educational environment of new hires regardless of the accomplishment of passing the CPA exam. Since partners and managers are most directly responsible for the ultimate decision to offer employment, these results are noteworthy for accounting students.

<sup>7</sup> Factorial ANOVA tests indicate that gender, type of organization, area of practice, and job title produce no significant effects in the main study analysis (i.e., in relation to educational environment and institutional reputation). Additionally, factorial ANCOVA tests indicate that the hours of undergraduate accounting courses taken and the hours of graduate accounting courses taken by study participants produce no effect on the main study analysis (as suggested by [Kohlmeyer et al. 2011](#)). Effects are also not found in factorial ANCOVA tests involving how often participant opinions are solicited in the recruiting process.

**TABLE 2**  
**Descriptive Statistics on Willingness to Offer Employment <sup>a</sup>**

	Educational Environment <sup>b</sup>											
	Traditional			Hybrid			Online			Combined		
	Mean	n	Std. Dev.	Mean	n	Std. Dev.	Mean	n	Std. Dev.	Mean	n	Std. Dev.
Between-Subjects Effects												
Highly Rated Institution <sup>c</sup>	6.25	32	0.880	5.89	46	1.120	5.31	39	1.280	5.79	117	1.171
Unrated Institution	5.89	44	1.017	5.75	40	1.032	5.17	53	1.236	5.57	137	1.149
Combined	6.06	76	0.979	5.83	86	1.076	5.23	92	1.250	5.67	254	1.162
Big 4	6.14	28	0.970	6.06	31	0.854	5.54	35	1.039	5.89	94	0.989
Non-Big 4	6.02	47	0.944	5.75	52	1.135	5.04	57	1.336	5.57	156	1.229
Combined	6.07	75	0.949	5.87	83	1.045	5.23	92	1.250	5.69	250	1.153
Within-Subjects Effects												
UL and LL same <sup>d</sup>	6.06	75	0.979	5.83	86	1.076	5.23	92	1.250	5.67	253	1.165
UL on campus, LL online	5.08	75	1.333	5.64	86	1.105	5.26	92	1.308	5.34	253	1.267
UL online, LL on campus	4.41	75	1.376	4.91	86	1.280	4.42	92	1.477	4.58	253	1.396
BAC only <sup>e</sup>	6.01	74	0.972	5.81	85	1.075	5.21	89	1.247	5.66	248	1.159
BAC on campus, M.B.A. online	5.14	74	1.348	5.45	85	1.210	5.07	89	1.355	5.22	248	1.311
BAC online, M.B.A. on campus	4.93	74	1.296	5.41	85	1.198	5.07	89	1.380	5.15	248	1.305
BAC online, M.B.A. online	3.46	74	1.482	4.18	85	1.684	3.96	89	1.658	3.88	248	1.637

<sup>a</sup> To a job applicant for an entry-level accounting position on a scale from 1 (not at all willing) to 7 (extremely willing).

<sup>b</sup> Job applicant's accounting coursework was taken either on campus (traditional), through blended learning (hybrid), or online.

<sup>c</sup> Job applicant's educational institution was either rated in the first quartile of business schools by national ranking publications, or unrated.

<sup>d</sup> Variable levels: (1) all undergraduate accounting coursework (upper-level [UL] and lower-level [LL]) was completed in the same educational environment, (2) UL coursework was completed on campus and LL coursework was completed online, and (3) UL coursework was completed online and LL coursework was completed on campus.

<sup>e</sup> Variable levels: (1) a baccalaureate degree (BAC) only was obtained (150 hours), (2) a BAC was completed on campus and an M.B.A. was completed online, (3) a BAC was completed online and an M.B.A. was completed on campus, and (4) both a BAC and an M.B.A. degree were completed online.

graduate with online credentials (Tabatabaei et al. 2014). Our results suggest that while employers still favor a traditional graduate, they are not necessarily averse to hiring an online graduate.

H2 purports that employers would be more willing to hire graduates whose degree was obtained from a highly rated institution as opposed to an unrated institution. With willingness to offer employment at an overall mean of 5.79 and 5.57 respectively (see Table 4), results do not support this hypothesis. Although alternative evidence from the study suggests that institutional reputation is, in fact, important to potential employers,<sup>8</sup> the dominance of other applicant attributes may explain the lack of influence of institutional reputation as experimentally manipulated.<sup>9</sup> For example, as demand for accounting graduates continues to reach record levels (AICPA 2013), employers might be willing to recruit from accredited institutions in general to meet their staffing needs, rather than limiting the recruitment pool to accredited universities with a certain rating. This may be especially true when the employer is presented with superior supplemental job applicant descriptors, such as the class ranking

<sup>8</sup> A dependent t-test examining participants' ratings of the importance of institutional reputation (mean = 5.77) and the importance of educational environment (mean = 5.36) shows that employers find institutional reputation significantly more important ( $t[253] = 5.021, p = 0.000$ ).

<sup>9</sup> To examine the efficacy of the manipulation of institutional reputation, an additional brief online survey was conducted. Of the 771 participants (some did not respond to demographic questions), 48 percent are male, 54 percent are at least managers, senior managers, or partners, and their average age is 38 years old. In regard to practice area, 52 percent are currently employed in public accounting and 26 percent are employed in industry (the remaining participants are employed in private practice, government, education, or some other self-reported area). Participants are from 41 states, with half employed in Texas. The most represented type of practice is local (36 percent), followed by international (17 percent), Big 4 (17 percent), national (11 percent), and regional (10 percent). The participants were randomly assigned to rate from 1 (less favorable) to 3 (more favorable) their perception of an AACSB-accredited institution's overall reputation with a top quartile ranking in national business publications (highly rated) or with no rating at all (unrated). A significant one-tailed independent t-test ( $t[769] = 41.703, p = 0.000$ ) indicates that participants more favorably perceive the reputation of the highly rated institution (mean = 2.78) as opposed to that of the unrated institution (mean = 1.41). Although a different participant pool is used (a subset of this pool is used in the main study), these results provide support that the manipulation of institutional reputation is valid.

**TABLE 3**  
**Significant<sup>a</sup> Mean Comparisons (across Educational Environment) On Willingness to Offer Employment<sup>b</sup>**

	Educational Environment <sup>c</sup>				
	Traditional Mean	Hybrid Mean	Online Mean	Combined Mean	
Between-Subjects Effects					
Highly Rated Institution <sup>d</sup>	6.25	5.89	*	5.31	5.79
Unrated Institution	5.89	5.75	*	5.17	5.57
Combined	6.06	5.83	*	5.23	5.67
Big 4	6.14	6.06	*	5.54	5.89
Non-Big 4	6.02	5.75	*	5.04	5.57
Combined	6.07	5.87	*	5.23	5.69
Within-Subjects Effects					
UL and LL same <sup>e</sup>	6.06	5.83	*	5.23	5.67
UL on campus, LL online	5.08	*	5.64	5.26	5.34
UL online, LL on campus	4.41	4.91		4.42	4.58
BAC only <sup>f</sup>	6.01	5.81	*	5.21	5.66
BAC on campus, M.B.A. online	5.14	5.45		5.07	5.22
BAC online, M.B.A. on campus	4.93	5.41		5.07	5.15
BAC online, M.B.A. online	3.46	*	4.18	3.96	3.88

<sup>a</sup> Those means with an asterisk (\*) between them (moving horizontally) are significantly different from one another at the  $p < 0.05$  level.

<sup>b</sup> To a job applicant for an entry-level accounting position on a scale from 1 (not at all willing) to 7 (extremely willing).

<sup>c</sup> Job applicant's accounting coursework was taken either on campus (traditional), through blended learning (hybrid), or online.

<sup>d</sup> Job applicant's educational institution was either rated in the first quartile of business schools by national ranking publications, or unrated.

<sup>e</sup> Variable levels: (1) all undergraduate accounting coursework (upper-level [UL] and lower-level [LL]) was completed in the same educational environment, (2) UL coursework was completed on campus and LL coursework was completed online, and (3) UL coursework was completed online and LL coursework was completed on campus.

<sup>f</sup> Variable levels: (1) a baccalaureate degree (BAC) only was obtained (150 hours), (2) a BAC was completed on campus and an M.B.A. was completed online, (3) a BAC was completed online and an M.B.A. was completed on campus, and (4) both a BAC and an M.B.A. degree were completed online.

of the student (top 5 percent across all conditions). It appears that the confluence of these considerations may outweigh the additive consideration of business school ratings.

### Hypothesis 3

This hypothesis predicts that Big 4 accounting firm employers will be less inclined to hire the online accounting graduate as opposed to their non-Big 4 counterparts. The results of a 3 (educational environment)  $\times$  2 (Big 4) factorial ANOVA<sup>10</sup> suggest that the Big 4 firm type significantly impacts participants' willingness to hire ( $F[1, 244] = 4.838, p = 0.029$ ). No interaction effects are present. Table 5, Panel B provides the overall results.

Pairwise comparisons were utilized to examine the source of the significant ANOVA result. These simple effects contrasts indicate that no significant difference in willingness to hire exists between Big 4 and non-Big 4 employers with regard to either the traditional or hybrid educational environment (see Table 4); however, a significant difference is obtained between Big 4 employers (mean = 5.54) and non-Big 4 employers (mean = 5.04) in the online educational environment condition ( $p = 0.031$ ). The difference is in the opposite direction of the hypothesis—that is, Big 4 employers appear *more* willing to hire the online graduate than their non-Big 4 firm counterparts. Consequently, H3 is not supported.

To further examine such a result, an ANOVA within only the online educational environment condition was conducted with local ( $n = 11$ ), regional ( $n = 10$ ), national ( $n = 21$ ), international ( $n = 15$ ) and Big 4 ( $n = 35$ ) firms. A significant difference is present among the groups ( $F[4, 87] = 2.787, p = 0.031$ ). *Post hoc* analysis reveals that the mean willingness to hire the online graduate is significantly different between the international employers (mean = 4.53) and Big 4 employers (mean = 5.54), and between the local employers (mean = 5.82) and international employers at the  $p < 0.05$  level. The regional and national

<sup>10</sup> A sensitivity analysis was conducted among the three between-subjects variables, educational environment, institutional reputation, and Big 4. No additional main effects or interactions are produced with the inclusion of institutional reputation.

**TABLE 4**  
**Significant<sup>a</sup> Mean Comparisons (within Educational Environment) On Willingness to Offer Employment<sup>b</sup>**

	Educational Environment <sup>c</sup>			
	Traditional Mean	Hybrid Mean	Online Mean	Combined Mean
Between-Subjects Effects				
Highly Rated Institution <sup>d</sup>	6.25	5.89	5.31	5.79
Unrated Institution	5.89	5.75	5.17	5.57
Combined	6.06	5.83	5.23	5.67
Big 4	6.14	6.06	5.54	5.89
			*	*
Non-Big 4	6.02	5.75	5.04	5.57
Combined	6.07	5.87	5.23	5.69
Within-Subjects Effects				
UL and LL same <sup>e</sup>	6.06	5.83	5.23	5.67
	*			*
UL on campus, LL online	5.08	5.64	5.26	5.34
	*	*	*	*
UL online, LL on campus	4.41	4.91	4.42	4.58
BAC only <sup>f</sup>	6.01	5.81	5.21	5.66
	*	*		*
BAC on campus, M.B.A. online	5.14	5.45	5.07	5.22
	*			
BAC online, M.B.A. on campus	4.93	5.41	5.07	5.15
	*	*	*	*
BAC online, M.B.A. online	3.46	4.18	3.96	3.88

<sup>a</sup> Those means with an asterisk (\*) between them (moving vertically) are significantly different from one another at the  $p < 0.05$  level.

<sup>b</sup> To a job applicant for an entry-level accounting position on a scale from 1 (not at all willing) to 7 (extremely willing).

<sup>c</sup> Job applicant's accounting coursework was taken either on campus (traditional), through blended learning (hybrid), or online.

<sup>d</sup> Job applicant's educational institution was either rated in the first quartile of business schools by national ranking publications, or unrated.

<sup>e</sup> Variable levels: (1) all undergraduate accounting coursework (upper-level [UL] and lower-level [LL]) was completed in the same educational environment, (2) UL coursework was completed on campus and LL coursework was completed online, and (3) UL coursework was completed online and LL coursework was completed on campus.

<sup>f</sup> Variable levels: (1) a baccalaureate degree (BAC) only was obtained (150 hours), (2) a BAC was completed on campus and an M.B.A. was completed online, (3) a BAC was completed online and an M.B.A. was completed on campus, and (4) both a BAC and an M.B.A. degree were completed online.

employers are equivalently willing to hire the online graduate (mean = 5.00). Given these means, a duplicate ANOVA was conducted excluding the international employers and an insignificant result is obtained ( $F[3, 73] = 1.716, p = 0.171$ ). This implies that the unwillingness of international employers to hire the online graduate (as a subset of non-Big 4 employers) drives the overall result that Big 4 employers are more willing to hire the online graduate. In sum, Big 4 employers do not appear to be any more or less inclined to hire the online graduate than local, regional, or national firms.

Since Big 4 employers constitute a particular set of employers in public practice, a wider net was cast to examine the perceptions of employers in public accounting in contrast to those in industry.<sup>11</sup> In relation to their willingness to hire the online graduate, those participants in public accounting (mean = 5.60;  $n = 45$ ) and those participants from industry (mean = 4.97;  $n = 35$ ) produce a significant difference ( $F[1, 75] = 5.386, p = 0.023$ ). No differences are present between the two groups in either the traditional or hybrid educational environment conditions. These results indicate that the rate of acceptance of online degrees among potential employers may be growing in public accounting at a quicker pace than in industry. Coupled with the Big 4 versus non-Big 4 findings above, this result may be explained by the fact that many large, multinational companies are more selective in their hiring process and offer higher compensation than firms in public accounting (Robert Half 2015).

<sup>11</sup> An insufficient number of participants remained to examine any differences among the other three types of practice areas.

**TABLE 5**  
**Study Results**

**Panel A: H1 and H2 (Factorial ANOVA), Dependent Variable: Willingness to Offer Employment**

	<u>MS</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Between-Subjects				
Educational Environment	15.176	2	12.213	0.000
Institutional Reputation	2.845	1	2.290	0.131
Ed. Environ. × Inst. Rep.	0.327	2	0.263	0.769
Error	1.243	248		
	<u>value</u>	<u>df</u>	<u>t-value</u>	<u>Sig.</u>
Main Effects Contrast Testing				
Traditional and Hybrid versus Online	-1.14	251	-4.839	0.000
Hybrid versus Online	-0.60	251	-3.575	0.000
Traditional versus Hybrid	-0.21	251	-1.220	0.224

**Panel B: H3 (Factorial ANOVA), Dependent Variable: Willingness to Offer Employment**

<u>Between-Subjects</u>	<u>MS</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Educational Environment	14.006	2	11.758	0.000
Big 4	5.763	1	4.838	0.029
Ed. Environ. × Big 4	0.726	2	0.609	0.544
Error	1.191	244		

**Panel C: H4 (Mixed Design), Willingness to Offer Employment by Course Level Ed. Environment**

	<u>MS</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Within-Subjects				
Course Level Ed. Environ.	81.216	2	112.453	0.000
Course Level × Ed. Environ.	6.376	4	8.828	0.000
Between-Subjects				
Educational Environment	15.834	2	4.831	0.009
Error	3.277	250		

**Panel D: H5 (Mixed Design), Willingness to Offer Employment by Master's Level Ed. Environment**

	<u>MS</u>	<u>df</u>	<u>F</u>	<u>Sig.</u>
Within-Subjects				
Master's Ed. Environ.	149.216	3	196.893	0.000
Master's Ed. Environ. × Ed. Environ.	6.258	6	8.258	0.000
Between-Subjects				
Educational Environment	14.685	2	2.962	0.054
Error	4.957	245		

To expand the picture of Big 4 employer perceptions, their general perception of the rigor of online accounting education was examined with an independent t-test using the entire participant population. Big 4 employer participant responses ( $n = 93$ ) were compared to non-Big 4 employer participant responses ( $n = 156$ ), producing a significant effect ( $t[247] = 1.937$ ,  $p = 0.044$ ) between the Big 4 group (mean = 3.60) and the non-Big 4 group (mean = 3.33). That is, Big 4 employers perceive online accounting education as generally more rigorous than their non-Big 4 employer counterparts (although it is worth noting that both employer groups rated online accounting education below the neutral rating of 4). Perhaps one explanation for the difference between these two groups is the Big 4's significant development and implementation of online training programs for continuing education purposes. Given that Big 4 employees are often required to complete training on certain accounting topics

through their employer-sponsored programs, they are more likely to be exposed to online learning than their non-Big 4 employer counterparts who do not offer similar programs.

#### Hypothesis 4

H4 examines employer preferences for those students who have taken some portion of their undergraduate accounting education online. A 3 (educational environment)  $\times$  3 (course level educational environment) mixed design was utilized to determine whether completing lower-level accounting coursework online was preferable to completing upper-level accounting coursework online, while considering the willingness to extend an offer of employment to the original applicant. The results are provided in Table 5, Panel C.

A significant main effect is produced for the repeated-measures variable ( $F[2, 250] = 112.453, p = 0.000$ ). Collapsing across all educational environmental conditions, employers are significantly less willing to extend an offer of employment ( $F[1, 252] = 97.363, p = 0.000$ ) to those applicants whose upper-level accounting coursework was completed online (mean = 4.58), as opposed to those applicants whose lower-level accounting coursework was completed online (mean = 5.34). Such results provide support for H4. Interestingly, we also find a significant interaction effect between the variables ( $F[4, 250] = 8.828, p = 0.000$ ) prompting further investigation.

A series of simple contrast tests among the three levels of course level educational environment was conducted at each level of educational environment (see Table 4). In the traditional educational environment condition, as compared to their original willingness to offer employment (mean = 6.06), employers' willingness to offer employment to a job applicant with only lower-level accounting coursework online (mean = 5.08) is significantly less ( $F[1, 74] = 47.856, p = 0.000$ ), and again significantly less ( $F[1, 74] = 23.125, p = 0.000$ ) when compared to the job applicant whose upper-level accounting coursework was online (mean = 4.41). In sum, employers prefer that all accounting coursework be completed on campus, but they are more willing to entertain a potential hire whose lower-level accounting coursework was completed online as opposed to upper-level accounting coursework.

In the hybrid educational environment condition, as opposed to the original willingness to offer employment (mean = 5.83), an insignificant variation is achieved ( $F[1, 85] = 2.908, p = 0.092$ ) if the job applicant's lower-level accounting coursework was obtained online (mean = 5.64). However, a significant difference is obtained ( $F[1, 85] = 30.445, p = 0.000$ ) when the employer considers a job applicant whose upper-level accounting coursework was obtained online (mean = 4.91). These results imply that employers are indifferent if a student completes his or her degree in a hybrid environment or takes lower-level accounting coursework online; however, employers prefer these options to an applicant whose degree was obtained with upper-level accounting coursework online.

In the online educational environment, in contrast to their original willingness to offer employment to an online degree applicant (mean = 5.23), employers' willingness to offer employment to those taking only lower-level accounting coursework online (mean = 5.26) is insignificantly different ( $F[1, 91] = 0.063, p = 0.802$ ). Employers are not enthusiastic, however, in their willingness to offer employment to a graduate whose upper-level accounting education was completed online (mean = 4.42), and a significant difference is found ( $F[1, 91] = 44.243, p = 0.000$ ). While such a result may seem counterintuitive, a possible explanation may lie in a potential employer's perception of the student's motivation, as opposed to the educational delivery method. Potential employers may perceive that students who began an undergraduate degree as a traditional on-campus student and switched to an online environment may be attempting to either avoid a more robust environment or manage their finances (by remaining employed) against their aspirations (obtaining a degree).<sup>12</sup>

#### Hypothesis 5

H5 purports that employers are more inclined to extend an offer of employment to a job applicant who obtained at least one degree on campus as opposed to obtaining both degrees online. Another 3 (educational environment)  $\times$  3 (Master's level

<sup>12</sup> As part of the assessment of employer perceptions of the online educational environment, participants were asked to rate how effective such an environment would be in administering seven core accounting courses. On a scale from 1 (not at all) to 7 (extremely), the following ratings are obtained: principles (4.50), information systems (4.30), cost (4.24), tax (3.76), intermediate (3.53), audit (3.44), and advanced (3.10). A Bonferroni *post hoc* analysis indicates that an online educational environment is seen as significantly more effective for the principles courses, as compared to all other courses, save information systems. Such a result deviates from the conclusions of Kohlmeier et al. (2011), as their data indicate that only information systems is considered effectively taught in an other than face-to-face environment. Therefore, it appears that principles of accounting may be gaining some acceptability as a suitable online course. A tabulation of Pearson's correlations among these online accounting course effectiveness ratings and the effectiveness ratings of instilling skill sets (technical, oral communication, written communication, team-building, and interpersonal) suggests that only the technical skills are seen as viably offered in an online educational environment, with the possible exception of team-building and interpersonal skills necessary for the audit course. Effectiveness ratings for all five examined skill sets range from 5.48 to 6.21 in the traditional environment, from 3.28 to 5.07 in the hybrid environment, and from 2.65 to 4.88 in the online environment. An ANOVA among the three levels of educational environment produce a significant effect for each skill set rating, indicating that ratings in the traditional environment are highest. Clearly, employers consider the traditional educational environment unchallenged in its ability to impart most soft skills.

educational environment) mixed design was conducted to determine the validity of such a prediction, once again considering willingness to extend an offer of employment to the original applicant. The results are provided in Table 5, Panel D.

Results indicate a main effect for the Master's level educational environment variation ( $F[3, 245] = 196.893, p = 0.000$ ). Collapsing across all levels of educational environment (see Table 4), employers do not distinguish between those applicants with an online baccalaureate degree and an on-campus M.B.A., or *vice versa* ( $F[1, 245] = 1.605, p = 0.206$ ). Additionally, the mean willingness to hire an applicant with both an online baccalaureate and M.B.A. degree (3.88) is significantly different ( $F[1, 245] = 367.357, p = 0.000$ ) from the mean willingness to hire those applicants with an online baccalaureate degree and an on-campus M.B.A. (5.15). These findings provide support for H5. Since a significant interaction effect exists between the between-subjects variable and the within-subjects variable ( $F[6, 245] = 8.258, p = 0.000$ ), simple contrast testing was conducted to examine the within-subjects variable at each level of the between-subjects variable.

In the traditional educational environment condition, potential employers' willingness to hire ratings are all significantly different from each other, in the following order (see Table 4): baccalaureate only (mean = 6.01), on-campus baccalaureate and online M.B.A. (mean = 5.14), online baccalaureate and on-campus M.B.A. (mean = 4.93), and online baccalaureate and M.B.A. (mean = 3.46). Such results clearly delineate a preference for all on-campus instruction. In the hybrid educational environment, obtaining a baccalaureate degree only (mean = 5.81) is significantly preferable to obtaining an on-campus baccalaureate and an online M.B.A. (mean = 5.45) or *vice versa* (mean = 5.41); however, the willingness to hire drops significantly for obtaining two online degrees (mean = 4.18). In this treatment condition, participants may value the practice of monitored exams throughout the job applicant's academic career. Finally, in the online educational environment, no significant differences are found among obtaining only the baccalaureate degree (mean = 5.21), an on-campus baccalaureate degree and an online M.B.A. (mean = 5.07) or *vice versa* (mean = 5.07). Interestingly, a significant drop in willingness to hire is produced for obtaining two degrees online (mean = 3.96). Such a result might indicate that potential employers may assume a specific reason exists for the completion of only one degree in an online environment; but, when the student chooses to complete his or her entire education (undergraduate and graduate) in an online environment, employers might question the individual's commitment to education.

### Additional Analyses

The open-response comments provided by 59 participants were examined for commonalities. Chi-square analyses demonstrate that the frequency with which comments are generated from each of the six experimental treatment conditions does not differ from chance. As suggested by coding procedures described in [Eilifsen and Messier \(2015\)](#), one of the authors of the present study (the first coder) began by generating a keyword frequency table using Microsoft Excel<sup>®</sup>. Then, she grouped together the most prevalently used keywords into five possible categories: the ability to attain certain skills in an online educational environment (skills), the perception of the quality of instruction in the online environment (quality), whether or not the student completed his or her own work in the online environment (integrity), the acceptability of a mix of traditional and online coursework (mixed), and whether other factors, such as institutional reputation or a successful interview, were discussed (other). Finally, she attributed each of the 59 comments to one of these five categories.

Next, the other author and four other individuals (university professors, independent of the study) read through the comments and assigned each one to the most applicable category. Fleiss' Kappa, an inter-rater reliability statistic among more than two raters for a categorical rating scheme ([Fleiss 1971](#)), demonstrates substantial agreement (i.e., [Landis and Koch 1977](#)) among the six coders ( $\kappa = 0.66$ ). These categories, along with representative comments, appear in Table 6.

The majority of comments (57 percent) reflect the employers' concern that skills, especially soft skills, are not easily attainable in an online environment. Concern over online quality (14 percent), the acceptability of mixed coursework (13 percent), and the consideration of other factors (15 percent) all, surprisingly, dwarf any considerations of the integrity of the online environment (1 percent). Presumably, comments are spurred by the questions presented in the study, none of which directly examine the perceived integrity of the online environment.

## CONCLUSIONS

The ever-increasing presence of online education substantiates investigation into its effects on accounting professionals' perceptions of the graduates whom they seek to hire. As a step toward revealing such employer perceptions, we conduct a comprehensive experimental study geared toward examining possible differences in willingness to hire generated among educational environment (traditional, hybrid, or online), institutional reputation (as either highly rated or unrated among national business publications), Big 4 employers, and various mixes of coursework at both the undergraduate and graduate level. We predict and find that potential employers still prefer that graduates obtain a degree in a traditional or hybrid educational environment, as opposed to an entirely online educational environment (however, movement toward greater acceptance of such is indicated). Contrary to expectations, other results suggest that institutional reputation, as defined, does not

TABLE 6

Categories<sup>a</sup> and Representative Examples of Open-Response Comments Regarding Online Accounting Education

Category	Representative Examples
Soft Skills	While I believe an online accounting education can teach technical accounting skills and prepare someone for the CPA exam, it is much less effective in teaching the other skills learned in a traditional campus environment that are critical to success in public accounting: interpersonal communication, teamwork, focus in the midst of distractions, etc. I believe in-person lectures, weekly face-to-face interaction, small classroom environments (upper level and graduate), and team projects are critical to developing strong accounting client service skills.
Quality	I have less reservations about online classes offered by a traditional, not-for-profit learning institution. However, the academic rigor of a degree provided by for-profit institutions makes me wary of the quality of the education provided.
Mixed Coursework	I would be less likely to hire someone whose degree is entirely driven by online education but would not be hesitant if some of the coursework was online. I think Principles could be taught effectively online, but it is a critical course for those deciding whether or not to pursue Accounting. For general courses, I think online content can be very effective; when the content is more complicated, learning in a collaborative environment is generally more effective.
Integrity	It seems like online academics could be open to abuse by the student obtaining outside help to complete work/tests that would not truly reflect [his/her] ability.
Other Factors Impacting Employment	If a student had extracurricular activities or work experience that reflect his/her ability to work in a team, then the fact that the education environment was entirely online is irrelevant. As long as someone has the required skillset, I don't necessarily care how [he or she] obtained it. The passing of the CPA exam and a good interview would be enough for me. The reputation of the institution weighs heavily on my hiring decisions. When an institution does not have a strong reputation generally the program will not be as strong whether the study is in class or online.

<sup>a</sup> Generated through the tabulation of keyword frequencies. Comments were assigned to each category by six coders.

produce any effect with regard to willingness to hire and that Big 4 employers are equally inclined as other types of employers (except international) to extend an offer to an online graduate. Finally, with regard to mixed accounting coursework, study results support our predictions: potential employers are more accepting of job applicants whose lower-level, as opposed to upper-level coursework, was completed online and employers are more favorable toward graduates who obtained at least one degree, be it the baccalaureate or the M.B.A., in a traditional educational environment, as opposed to those graduates who received both degrees online.

Several key implications affecting students, accounting faculty, and accounting practitioners emerge from the results of this study. Accounting students and their faculty advisors are presented with a clear avenue for navigating the incorporation of online accounting coursework into their education. Potential employers may not necessarily reject an entry-level job candidate with an entirely online accounting undergraduate degree (with the caveat that the candidate has superior marks and attained the degree at an accredited institution), but these candidates are still at a significant disadvantage as compared to candidates with a traditional (on campus) or hybrid (blended learning) degree. Students should be sensitive to the premium that employers place on soft skills, which are overwhelmingly perceived as attainable only in a traditional educational environment. Study results suggest that the best strategy to gain favor with potential employers may be to complete only technically intensive, lower-level accounting coursework online, if necessary. In terms of graduate education, employers appear more flexible in acceptance of an online M.B.A.; however, this is true only when the undergraduate degree was obtained in a traditional environment. Further, when contemplating online coursework, students should consider their long-term employment goals, recognizing that employers in public accounting, including Big 4 firms, may be more accepting of some online coursework as compared to large, multinational firms in private industry.

Implications for practitioners are also conveyed by study results. As more and more universities begin to offer online business courses (Wright 2014) and many higher education students now take at least one online course (Allen and Seaman 2014), employers should recognize the importance of incorporating the factor of educational environment into their decision-making process for new hires. Specifically, employers must determine how much, if any, online accounting coursework they are willing to accept. When making this determination, employers may want to consider that there is a growing acceptance of



lower-level online accounting coursework within the profession. Furthermore, public accounting employers should be aware that their competitors may consider hiring an applicant with some online coursework or an online M.B.A., provided the applicant has taken other courses in a traditional environment and has otherwise attractive qualities, when determining future recruitment strategies.

The results of this study should be considered in the light of several limitations. First, the participant pool included a majority of accounting professionals from Texas, which may somewhat reduce the ability to generalize the findings to other sectors of the country. However, most study participants represent organizations with at least a national presence, since 75 percent of the participants are employed with either a Big 4 firm or an international or national organization. Second, some study prompts, including questions regarding the efficacy of skill sets and accounting courses, were not randomized among study participants. Since the perceptions of these factors in the online educational environment are overwhelmingly negative, it is unclear if non-randomization produced any ill effects. Third, the description of job applicants, purposefully, did not include mention of an internship or previous accounting-related work experience. The impact of these factors may possibly mediate the effect of educational environment or institutional reputation.

Avenues for future research are abundant. The most obvious future study involves replicating a version of the present study, in approximately five years, and discerning if the currently observed restrictions on the acceptance of online accounting education remain similar. Given the growth rate of online education, a future study may discover that an employer's increased familiarity with online accounting education in turn produces a more positive effect in those individuals' willingness to hire online graduates. Comparisons might also be made between accounting employers and employers in other business fields in hiring the online graduate. Since online education is here to stay, employer perceptions of such education should continue to be an important research focus.

## REFERENCES

- Adams, J. 2008. Understanding the factors limiting the acceptability of online courses and degrees. *International Journal on E-Learning* 7 (4): 573–587.
- Adams, J., and M. H. DeFleur. 2005. The acceptability of a doctoral degree earned online as a credential for obtaining a faculty position. *American Journal of Distance Education* 19 (2): 71–85.
- Adams, J., and M. H. DeFleur. 2006. The acceptability of online degrees earned as a credential for obtaining employment. *Communication Education* 55 (1): 32–45.
- Adams, J., and M. H. DeFleur. 2007. The acceptability of credentials earned online for obtaining employment in the health care professions. *Communication Education* 56 (3): 292–307.
- Ahadiat, N., and K. J. Smith. 1994. A factor-analytic investigation of employee selection factors of significance to recruiters of entry-level accountants. *Issues in Accounting Education* 9 (1): 59–79.
- Allen, I. E., and J. Seaman. 2011. *Going the Distance, Online Education in the United States, 2011*. Babson Survey Research Group. Available at: <http://www.onlinelearningsurvey.com/reports/goingthedistance.pdf>
- Allen, I. E., and J. Seaman. 2013. *Changing Course: Ten Years of Tracking Online Education in the United States*. Babson Survey Research Group. Available at: <http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>
- Allen, I. E., and J. Seaman. 2014. *Grade Change: Tracking Online Education in the United States*. Babson Survey Research Group. Available at: <http://www.onlinelearningsurvey.com/reports/gradechange.pdf>
- American Institute of Certified Public Accountants (AICPA). 2013. *2013 Trends in the Supply of Accounting Graduates and the Demand for Public Accounting Recruits*. Durham, NC: AICPA. Available at: <http://www.aicpa.org/InterestAreas/AccountingEducation/NewsAndPublications/DownloadableDocuments/2013-TrendsReport.PDF>
- Association to Advance Collegiate Schools of Business (AACSB). 2014. *Search Schools by Program Type*. Available at: <http://www.aacsb.edu/accreditation/accredited-members/locate/> (last accessed June 14, 2014).
- Bailey, J., and L. Flegle. 2012. Hiring managers' perceptions of the value of an online M.B.A. *Online Journal of Distance Learning Administration* 15 (2).
- Baysden, C. 2013. Supply and demand for accounting talent at record levels. *Journal of Accountancy* 216 (3): 30–32.
- Brandon, D. M., J. H. Long, T. M. Loraas, J. Mueller-Phillips, and B. Vansant. 2014. Online instrument delivery and participant recruitment services: Emerging opportunities for behavioral accounting research. *Behavioral Research in Accounting* 26 (1): 1–23.
- Bryant, S. M., J. B. Kahle, and B. A. Schafer. 2005. Distance education: A review of the contemporary literature. *Issues in Accounting Education* 20 (3): 255–272.
- Bruce, G. D. 2010. Exploring the value of M.B.A. degrees: Students' experiences in full-time, part-time, and executive M.B.A. programs. *Journal of Education for Business* 85: 38–44.
- Carnevale, D. 2007. Employers often distrust online degrees. *The Chronicle of Higher Education* (January 5): A28.
- Chen, C. C., K. T. Jones, and K. A. Moreland. 2013. Online accounting education versus in-class delivery: Does course level matter? *Issues in Accounting Education* 28 (1): 1–16.

- Clarke, M. 2007. The impact of higher education rankings on student access, choice, and opportunity. *Higher Education in Europe* 32 (1): 59–70.
- Columbaro, L. N., and C. Monaghan. 2009. Employer perceptions of online degrees: A literature review. *Online Journal of Distance Learning Administration* 12 (1).
- Cook, E., and B. Finch. 1994. Qualities employers seek in new accounting employees. *Journal of Education for Business* 69 (3): 136–140.
- DeFleur, M., and J. Adams. 2004. Acceptability of online bachelor's degrees as criteria for admission to graduate programs. *Journal of Computing in Higher Education* 16 (1): 150–163.
- Eastman, J., J. Bocchi, and D. Rydzewski. 2013. Determinants in online MBA program selection: An exploratory study. *International Journal of Management in Education* 7 (1–2): 44–60.
- Eilifsen, A., and W. F. Messier, Jr. 2015. Materiality guidance of the major public accounting firms. *Auditing: A Journal of Practice & Theory* 34 (2): 3–26.
- Fleiss, J. 1971. Measuring nominal scale agreement among many raters. *Psychological Bulletin* 76 (5): 378–382.
- Graduate Management Admission Council (GMAC). 2013. *Corporate Recruiters Survey*. Available at: <http://www.gmac.com/market-intelligence-and-research/research-library/employment-outlook/2013-crs-hiring-report-01.aspx>
- Grossman, A., and L. Johnson. 2013. Hiring the online accounting student. *The Kentucky CPA Journal* 4: 24–25.
- Guinn, R., S. Bhamornsiri, and C. Blanthorne. 2004. Promotion to partner in big firms: Truths and trends. *The CPA Journal* 74 (4): 54–55.
- Hardin, J. R., and M. H. Stocks. 1995. The effect of AACSB accreditation on the recruitment of entry-level accountants. *Issues in Accounting Education* 10 (1): 83–95.
- Herrington, J. D. 2010. MBA: Past, present and future. *Academy of Educational Leadership Journal* 14 (1): 63–76.
- Jeancola, M. M. 2011. *An Investigation into the Perception of Online Degrees Earned as Credentials for Obtaining Employment in Public Accounting Firms*. Doctoral Dissertation, UMI No. 3467577. Ann Arbor, MI: ProQuest Dissertation Publishing.
- Kohlmeyer, J. M., L. P. Seese, and T. Sincich. 2011. Online versus traditional accounting degrees: Perceptions of public accounting professionals. *Advances in Accounting Education: Teaching and Curriculum Innovations* 12: 139–165.
- Kyle, R., and T. Festervand. 2005. An update on the high-tech MBA. *Journal of Education for Business* 80 (4): 240–244.
- Lamer, M. 2008. *A Description of the Perceptions of Human Resources Professionals Regarding MBA Degrees from For-Profit and Traditional Universities in Terms of Rogers' Diffusion of Innovations Theory*. Doctoral dissertation, UMI No. 3297503, ProQuest Dissertation Publishing: Ann Arbor, MI.
- Landis, J. R., and G. G. Koch. 1977. The measurement of observer agreement for categorical data. *Biometrics* 33 (1): 159–174.
- Lewis, T., T. Shimerda, and G. Graham. 1983. What the academic advisor needs to know about job placement. *Journal of Accounting Education* 1 (2): 135–142.
- Linaropoulos, N. 2012. Employers' perspective of online education. *Campus-Wide Information Systems* 29 (3): 189–194.
- Mayadas, A. F., J. Bourne, and P. Bacsich. 2009. Online education today. *Science* 323 (5910): 85–89.
- Metrejean, E., and T. G. Noland. 2011. An analysis of CPA firm recruiters' perceptions of online master of accounting degrees. *Journal of Education for Business* 86: 25–30.
- Ng, C. 2011. Emerging trends in online accounting education at colleges. *Pennsylvania CPA Journal* 82 (1): 1–3.
- Owens-Jackson, L., G. Highsmith-Quick, and D. Robinson. 2013. Economy-driven changes in recruiting practices: Essential recommendations for accounting firms. *The CPA Journal* 83 (7): 68–71.
- Palloff, R., and K. Pratt. 2003. *The Virtual Student: A Profile and Guide to Working with Online Learners*. 1st edition. San Francisco, CA: Jossey-Bass.
- Pasewark, W., J. Strawser, and J. Wilkerson. 1988. Empirical evidence on the association between characteristics of graduating accounting students and recruiting decisions of accounting employers. *Issues in Accounting Education* 3 (2): 388–401.
- Peters, K. 2007. Business school rankings: Content and context. *Journal of Management Development* 26 (1): 49–53.
- Rindova, V., I. Williamson, and A. Petkova. 2005. Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation. *The Academy of Management Journal* 48 (6): 1033–1049.
- Robert Half. 2015. *2015 Salary Guide: Accounting and Finance*. Available at: [http://s3.amazonaws.com/DBM/M3/2011/Downloads/Salary\\_Guide\\_Robert\\_Half\\_2015.pdf](http://s3.amazonaws.com/DBM/M3/2011/Downloads/Salary_Guide_Robert_Half_2015.pdf)
- Schmutte, J. 1998. Student and public accounting firm recruiter attitudes toward the desirability of student characteristics: A longitudinal study. *Journal of Accounting Education* 16 (3–4): 429–461.
- SR Education Group. 2015. *Complete Guide to an Online Accounting Degree*. Available at: <http://www.guidetoonlineschools.com/degrees/business/accounting?pid=2010>
- Tabatabaei, M., and A. Gardiner. 2012. Recruiters' perceptions of information systems graduates with traditional and online education. *Journal of Information Systems Education* 23 (2): 133–142.
- Tabatabaei, M., A. Solomon, E. Strickland, and E. Metrejean. 2014. Employers' perceptions of online accounting education. *American Journal of Distance Education* 28: 196–206.
- Watters, M., and P. Robertson. 2009. Online delivery of accounting courses: Student perceptions. *Academy of Educational Leadership Journal* 13 (3): 51–57.

- Webley, K. 2012. Can an online degree really help you get a job? *Time* (October 18). Available at: <http://nation.time.com/2012/10/18/can-an-online-degree-really-help-you-get-a-job/>
- Wellen, A. 2006. Degrees of acceptance. *The New York Times* (July 30).
- Wright, K. 2014. The trouble with online undergraduate business degrees in traditional regional universities. *Journal of College Teaching and Learning* 11 (1): 13–24.
- Zammuto, R. 2008. Accreditation and globalization of business. *Academy of Management Learning and Education* 7 (2): 256–268.
- Zell, D. 2001. The market-driven business school—Has the pendulum swung too far? *Journal of Management Inquiry* 10 (4): 324–338.

Copyright of Issues in Accounting Education is the property of American Accounting Association and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.