UNDERSTANDING THE FACTORS LIMITING THE ACCEPTABILITY OF ONLINE COURSES AND DEGREES

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Abstract

This study examines prior research conducted on the acceptability of online degrees in hiring situations. In a national survey, a questionnaire was developed for assessing the importance of objections to accepting job candidates with online degrees and sent to university search committee chairs in institutions advertising open faculty positions (which normally require a doctoral degree). Qualitative statements regarding such objections were drawn from four national surveys and arranged into a paired-comparison questionnaire. Based on the Law of Comparative Judgment, an index was developed from a statistical analysis based on the responses of 123 university and college administrators (chairpersons, department heads and deans). The findings revealed that objections concerned three issues: face-to-face classroom experience, reputation of institution for rigor and mentored learning experiences are the stumbling blocks for online degrees to be perceived as being as acceptable as traditional degrees. These findings may provide an important perspective on the difficult issue of how to design new approaches to distance education that will improve the acceptability of course and degree offerings.

UNDERSTANDING THE PERCEIVED ACCEPTABILITY
OF ONLINE COURSES AND DEGREES

Online distance education has grown to become an important part of higher

education. Millions of people have completed college courses online. Large numbers have

earned degrees by taking advantage of these new educational opportunities. Increased

access to a higher education in this form has allowed people living in rural areas, working

professionals, military personnel in distant locations and single parents with busy schedules

to earn college credits (Grenzky & Maitland, 2001). Students in traditional institutions have

also taken advantage of the large number of online classes that are available. Such courses

allow flexible scheduling and convenience. For example, many colleges and universities

have reported that residential students seeking to increase their course load account for a

substantial portion of those enrolled in their online sections (Carnevale & Olsen, 2003).

At the same time, the number of online course offerings by traditional colleges and

universities has not kept pace to accommodate the demand of degree-seeking students.

Some estimates show that distance education has expanded at a rate that is more than 10

times the growth of the general post-secondary market (Allen & Seaman, 2005). Private,

for-profit institutions---often called "virtual" institutions, since they have no physical

campus--- have quickly moved to service a large part of this new demand. These

institutions, providing instruction only via the Internet, seek students that might ordinarily

enroll with public and private non-profit (traditional) residential programs (Blumenstyk, 2005). Competition for new enrollments has led the virtual institutions to expand both the number of degree programs and the number of graduate degrees that they award. For example, doctoral programs delivered online can be managed by students whose life circumstances prevent them from attending on-campus classes in the traditional way. Thus, the flexibility and convenience of distance learning serves their needs.

The focus of the present research is not to assess the social value of distance learning programs, or to make comparative evaluations between residential and non-residential programs. Its goal is to continue a line of research regarding the *acceptability* by those who make entry decisions – "gatekeepers" – concerning candidates whose degrees have been earned wholly, or partially online. The present research is based on information gathered in four national surveys designed to assess the acceptability of online degrees in business, health professions and academic hiring situations. While the employment market for doctoral candidates is broad, the present research focused on university hiring committee chairpersons. Specifically, the purpose of this paper is to assess gatekeeper perceptions that seem to have an affect on the acceptability of online degrees as criteria for employment in the academe. Search committee chairs were asked to complete a paired-comparison questionnaire and to provide written comments in order to understand their priorities. The goal of the present study is to learn more about the perceived acceptability of

online degrees, and to offer suggestions for future research in distance education doctoral programs.

Doctoral programs in the United States

The number of graduates from doctoral programs in the United States has been slowly increasing over the past 10 years and is projected to rise for the foreseeable future. A major factor is the increased number of college-age students in the U.S. population, as well as an increasing recognition by parents and others of the economic advantages of entering the labor force with degree in hand. Due to these trends, the demand for professors has also increased. In 2004, the number of doctoral degrees awarded by research institutions totaled 42,155, the largest number of degrees ever awarded in a single academic year (Hoffer et al, 2004). As these trends continue, the U.S. Department of education projects that the number of doctoral degrees conferred will rise by 21 percent by 2015 (Hauser & Bailey, 2006). Half of all new doctoral graduates expected to seek academic employment – with life sciences, social sciences, and education representing approximately 49 percent of the disciplines involved (Facts in brief, 2001). To fill this growing need, many institutions are moving to mirror residential coursework with online versions, or to create new degree programs that are offered entirely online. (Carnevale, 2005).

In summary, then, the number of graduate programs that are offered completely online is growing to meet the growing number of students and increasing need for new

faculty. The strong demand is supported by research that favorably compares educational outcomes of online and residential programs. For example, many studies demonstrate student satisfaction, achievement and learning outcomes that are on par with residential programs (Bernard, Abrami & Lou, et al, 2004). Degree.net, a web-based service that reviews online courses of study, lists dozens of accredited doctoral programs offered by U.S. based for-profit, as well as online programs offered by non-profit institutions (Bears & Bears, 2006). Online degree programs are even appearing in America's Best Graduate Schools published by U.S. News & World Report, which lists seven online doctoral programs in education alone. While none of the for-profit distance education programs offered by virtual institutions are accredited by the National Council for Accreditation of Teacher Education (NCATE), each has a form of accreditation that enables these institutions to advertise in direct competition with residential programs (Blumenstyk, 2003).

The online Capella University provides an example. It offers programs in a wide variety of disciplines, with doctoral degree programs ranging from applied sciences to human services. As one of the largest providers of online doctoral degree programs, Capella offers 675 online courses with 6,000 students pursuing doctoral degrees in business organization and management, education, psychology, human services, or information technology. These students account for almost half of Capella's enrollment, a majority of the company's revenues, and all of its operating profit (Pulley, 2005). These

figures would suggest that one-half of Capella's 6,000 students would seek employment in

the academe by viewing ads in reputable sources such as the Chronicle of Higher

Education. Capella's doctoral graduates, then, would represent 14% of new job-seeking

academicians. Combined with the number of degree candidates from large online

institutions such as the University of Phoenix, Walden University, and Argosy University

the number of doctoral candidates from online programs seeking employment in the

academe may be substantial in the near future.

Acceptability of online degrees

As the above summary indicates, there is no question that online degree programs

are a growing part of today's higher educational system. As noted, these courses offer a

convenient way for millions of degree-seeking students who are otherwise unable to attend

classes in a residential setting. Some research appears to have demonstrated that a degree

earned online is in many ways similar to one earned in traditional settings. For example,

while online courses often have higher dropout rates (Carr, 2000; Jensen, 2001), successful

online students tend to indicate that they are "equally or more satisfied" with their courses

when compared to those in "traditional" instructional settings. (MacFarland, 1999; Sikora,

2003).

Online learning is not suitable for everyone. Some variations in success in an online

course can be attributed age, learning style and motivation (Dyrud, 2000; Diaz, 2002).

While some students have migrated back to the classroom so that they could be with "live"

people (Guernsey, 1998), those who adapt to online instruction appear to show no significant difference in test-score achievement (Russell 1999; Gagne & Shepherd, 2001) or retention (Bernard, Abrami, Lou, et. al., 2004).

A new area of research, however, has raised the question concerning the *acceptability* of degrees that have been earned solely or partly online. The purpose of this new area of research has been to investigate whether distance learning and traditional degrees are equal in the eyes of "gatekeepers" in different situations – those who review the credentials of applicants for various kinds of openings. These studies are not concerned with *why* students chose to enroll. Neither are they concerned with comparing educational outcomes nor with evaluating the educational merits of distance learning. The question that these studies are concerned with has been whether gatekeepers see online degrees as having *the same value for their purposes* as a degree earned in a traditional residential program. The results suggest that those who hold online degrees, or whose records include a significant amount of online coursework in their curriculum of studies, *are not judged as having qualifications that are equal* to those of graduates who earn their degrees in a residential program.

The concept of "acceptability" has been studied in several recent research settings. These include the following: using credits earned online as a credential when applying to a university graduate program (DeFleur & Adams 2004)[1]·, applying for a job in a business hiring situation with a bachelor's degree earned wholly or partially online (Adams &

DeFleur, 2006) [2], seeking employment in a university faculty position (Adams & DeFleur, 2005) [3], and seeking employment in the health professions (Adams, DeFleur & Heald, 2007) [4]. In each of these studies, gatekeeper- respondents were asked to choose between candidates whose qualifications differed only in terms of whether they earned their credits online or in a traditional residential program.

A more recent national survey of health hiring practices shows a remarkable consistency with the previous studies, with both quantitative and qualitative analyses yielding similar results. Only six percent of health profession employers indicated a willingness to hire an applicant with an online degree and only fifteen percent would accept an applicant with half of his or her courses earned online (Adams, DeFleur & Heald, 2007). Table 1 shows the percentage of "gatekeeper" respondents in each of the acceptability studies, that would be willing to accept a candidate with a traditional residential degree, versus a mix of online courses and residential study, or one earned with online courses only.

TABLE 1 ABOUT HERE

In each of these studies, the qualitative statements that were gathered to clarify checkbox selections made by respondents (noted in table 1) point to classroom experiences with other students, working with professors, and mentored experiences as shortcomings

that compromise the perceived value of a degree not earned in the traditional manner. For example, the keyword *interaction* appeared most frequently in each of the studies. Upon closer examination, this term was used in a variety of contexts including *face-to-face contact* with students and instructors, group discussions, and classroom experiences. Other categories that dominated the comments related to the perceived *quality* of an institution's reputation for rigorous programs, academic honesty, and the whether the school is accredited by a federally recognized organization. While smaller in number, the positive comments were focused on the perception that completing an online course demonstrated discipline and an ability to work with technology. In these cases, respondents indicated that students who have experience with online education would be *more desirable* in their setting because online education requires extensive use of computer technologies – a plus in some workplaces.

Again, the purpose of these studies has been to examine the issue of the *acceptability* of a college degree earned online, not the *merits* of distance learning. The current research does not seek to examine teaching methods, the implications of social interactions take place in online communities, or measure the quality of learning. Instead, it focuses on defining which factors are crucial to the design of online instruction that may improve the acceptability by gatekeepers of degrees earned in online programs. For present purposes, such programs are defined as those in which students can obtain a degree either totally or partially online. The questions in the current research are intended to uncover

information on why university degrees, earned in this way, are not perceived as equivalent to degrees earn in residential programs by hiring gatekeepers in a university setting.

Research questions

As indicated, the purpose of this research is to clarify the objections that gatekeepers have voiced with regard to online degrees. By discovering the importance of these objections, course developers and instructional designers may be able to apply this information in ways that can alleviate those concerns. If that can be done, it may raise the perceived quality of online degrees earned by applicants to that of their traditional counterparts. Therefore, this study was designed to provide insight to "what counts" and to understand which instructional features affect the acceptability of online degrees in order to guide the future development of distance learning systems.

> RQ1: Which factors are most important to the acceptability online degrees in the
>
> eyes of hiring decision-makers in the academe?
>
> RQ2: What do hiring decision-makers in the academe consider to be areas critical
>
> to the improvement of online degrees?

Method

The method of developing the statements used in the questionnaire can be illustrated by that used in the case of applicants seeking academic employment with a doctoral degree. These are candidates applying to be hired as professors. In the faculty hiring study conducted by Adams and DeFleur (2005), search committee chairs were asked to write

brief descriptive statements to explain any uncertainties or concerns they had with doctoral degrees earned wholly or partially online. These qualitative statements were analyzed and descriptive categories were developed to provide a deeper understanding of checkbox responses on the questionnaire.

This same approach was used in four independent national studies, in different hiring situations. The qualitative statements were collected from respondents who were asked if online degrees were as acceptable as degrees earned in a traditional manner. Respondents voiced positive aspects of distance education or reservations about "missing" elements. Essentially, then, the questionnaires for each of the acceptability studies were identical in design. After the questionnaires were returned in each of the studies, categories were developed from qualitative statements.

The collection of statements, based on the responses of the 552 participants in the four acceptability studies, was organized into a number of qualitative categories. Catpak, computer-based content analysis software was used to help define categories that summarized why gatekeepers did not find online degrees as acceptable as traditional degrees. In total, the comments consisted of more than 20,000 words. For the purposes of this paper, these categories were refined into six distinct positive and negative categories that were most commonly mentioned as affecting the acceptability of online degrees (Table 2). The statements drawn from four previous national surveys, then, were incorporated into a format allowing a quantitative assessment of their importance with regards to *understanding the acceptability* of online curriculum.

TABLE 2 ABOUT HERE

The manner of locating and contacting suitable respondents followed essentially the same method in each of the hiring or admission studies. For example, the same procedure was used for a study that examined hiring practices in the academe (Adams & DeFleur, 2005). Contact information was gathered for open faculty positions from advertised job vacancies posted on the Chronicle of Higher Education web site. Web page advertisements that listed contact information for committee chairs (gatekeepers) were downloaded. In this way, a total of 963 unique job postings from research, doctoral and comprehensive universities were captured and saved to a computer directory of potential respondents. Three hundred web pages were randomly selected from the pool of 963 by a piece of software programmed developed to complete this task.

Each of the 300 pages was inspected to ensure a search committee chair name, email address, and physical address was listed. If one of the selected pages did not have contact information, a replacement page was randomly selected from the pages remaining in the pool of job advertisements. This process was repeated until a contact list of 300 search committee chair names and contact information had been completed. The contact person in each of the selected ads was mailed a questionnaire with return postage paid envelope with instructions to complete and return the questionnaire.

The questionnaire to evaluate the importance of the qualitative statements used a paired-comparison procedure devised by L. L. Thurstone. The procedure asks that respondents check a series of side-by-side statements, one-by-one, and make a "comparative judgment" (Edwards, 1957). This requires each of the six statements to be arranged in pairs, so that each statement is at some point, individually matched with the

other five. For example, arranging the six statements in this fashion required a questionnaire consisting of fifteen comparative statements (n * n-1 / 2). Respondents are asked to examine each pair and select the statement in that has greater importance (see Figure 1.).

FIGURE 1 ABOUT HERE

While this requires a lengthy questionnaire, the procedure results in a matrix that shows proportionally, how many times each statement was selected. Once questionnaires are collected, selections are distributed to a matrix showing the number of times each statement was considered to be of greater importance. Dividing each of these raw scores by the number of respondents creates a matrix of proportions. It is important to note that if that if the questionnaire was completed by selecting a single statement in each pair randomly, the distribution of proportions would show that each statement was chosen an equal number of times. The matrix of proportions is used to build a second matrix consisting of *z-scores* associated with each proportion.

The underlying principle of the second matrix is to reveal where each statement would appear on a normal (random) distribution. Those statements with a low proportion will appear at one of the extremes of the normal distribution showing that the statement had either high or low importance to the respondents. The *z-scores* are totaled for each of the statements and averaged. Through this procedure the proportions are translated into a weighted continuum that shows which of the statements is *greater* in relation to the others.

Each search committee chairs, then, was asked to select which statement in each pair of criteria was seen as more important regarding the quality of a university education. Their selections were compiled to reveal a scale that shows the importance of each statement. The paired-comparison section was followed by space to allow respondents to offer written comments on the questionnaire.

Results

When data collection was concluded, six questionnaires were discarded because of formatting problems and nine were excluded because they were returned unopened. After examining each questionnaire three others were discarded as unusable, leaving a total of 123 that were used to compile the results. As previously outlined, the data from the paired comparison section of the questionnaire were used to create a table consisting of proportions. The proportions are used to construct a table of z-scores that are totaled to reveal a continuum – a scale that shows the relative importance of each statement as compared to the others. Using a simple transformation (one that does not change their relative positions on the continuum) the lowest in the array can be assigned a zero and the highest a score of 100. The result is a set of *weights* that correspond to each of the criteria in the array. The weights obtained in this manner for the 6 criteria judged by the 123 search committee chairs are shown in Table 3:

TABLE 3 ABOUT HERE

Qualitative results

Content analysis is a research method that is used to categorize thematic (or

contextual) uses of keywords and phrases. Catpak, a computer-based program, was used to generate frequency tables of words found in the written comments. The frequency tables were carefully examined to form word groupings, or categories consisting of themes. Brief examples were then taken from the written comments to illustrate the context of the categories.

The significance of the content analysis was to discover if any further information could be gathered to explain the results of the quantitative scale. Forty percent (N=48) of the respondents used the provided space at the end of the questionnaire to give written comments. The comments were grouped together, analyzed and the comments were organized by the groupings. The categories that fell out of the content analysis were *face-to-face interaction*; *educational experiences*; *quality* and *academic rigor*. The majority of the comments related to the top three categories on the weighted scale.

The comments articulated some factors that hold online courses back and prevent their being perceived as being equally acceptable as traditional degrees. Some respondents pointed out that online courses are more acceptable for training, certificates and undergraduate classes, but not for graduate classes. Many comments indicated that interaction with professors and peers as being an essential part of an education and that these skills can only be gained by attending classes in a traditional setting. Some of the comments to support or explain the categories appear in Table 4.

TABLE 4 ABOUT HERE

Discussion

This study continues a line of research regarding the *acceptability* of degrees earned wholly (or partially) online by evaluating the importance of those factors that negatively affect the perceived value of online degrees. While online degree programs represent a valuable educational opportunity for millions of people, permitting many to attend college – a growing body of research reveals clearly that employers and university administrators regard traditional degrees as being far more preferable. A great deal of research has been conducted to compare online and traditional course work but little attention has been devoted to what happens to graduates of online programs when seeking to make use of their credentials. These findings have implications for students enrolled in online distance education degree programs, instructional developers and university administrators who manage continuing education programs.

The findings thus far seem to suggest that in part, the perception of face-to-face contact with instructors and mentoring are an important key to what many would consider a "quality" education. While the reputation of a university for academic rigor is also associated with acceptability, traditional classroom experiences are perceived to offer something more. It may be suggested that online programs, even those offered by institutions noted for excellent academic standards, may always be regarded as "missing"

key elements.

In summary, then, more research is needed in the area of distance learning and acceptability from the perspective of a potential employer. Further, online distance learning is an established method of delivery, and yet research in this critical area seems to be lagging. Experimentation with innovative technologies appears to be constrained by the institutionalization of content management systems and relying on faculty to work with complex digital media tools to develop innovative models for the delivery of instruction. Future research projects might focus on a more detailed examination of potential curricular solutions including;

1). Additional comparison studies in order to evaluate whether hybrid or blended learning satisfies the perception that classroom experiences, working with professors, and interaction are "missing." Some research appears to show that this method of distance learning has advantages in that hybrid classes include some face-to-face interaction. For example, hybrid classes are typically designed to offer online course materials, online interaction with teachers and students, and occasional face-to-face classroom based sessions (Delialioglu, 2005). Comparison studies suggest that student achievement rates and satisfaction rates are higher in hybrid courses that focus on study skills (Tuckman, 2002), computer sciences (Lilja, 2001) and in pure sciences (Persin, 2002). While these results seem impressive, the body of comparison studies that evaluate these delivery systems is limited.

2). The overwhelming majority of online, distance learning courses are structured around content management systems that employ text as the basis for all communication (Adams, 2006). The notion that some media is more effective than others or that they may enhance some learning activities is important to the acceptability debate. For example, advancements in streaming video technologies that allow synchronous communication (i.e. visual, verbal and text) between a group of students and the professor have not been used extensively as a learning environment. While these technologies advance quickly, new models of online learning have been slower to appear. Perhaps new models using holographic projection systems coupled with rich internet applications will change the perception that face-to-face communication is "missing." In short, the perception of academic honesty, social presence, and the validity of degrees earned at a distance from a gatekeeper perspective should be more influential in the development of emerging educational technologies.

3). Finally, perhaps computer guided instruction may offer new approaches to online distance education. As Seymore Papert pointed out, computers have the potential to be more than a conduit for instructional materials (1980). This line of thinking has been advanced by Cobb (1997), who suggested that a computer is part of the learning process -- not simply a means for delivering content (Miettinen & Nokelainen et al, 2005). For example, computers can be programmed to assist learners by responding to a their actions, perhaps by automatically selecting or sequencing content. When coupled with databases,

programmed lessons can adapt and alter lessons by drawing on a network of resources. In this type of instructional system, each lesson is different -- shaped by student test scores, their pacing, or by level of difficulty. The result is a knowledge-based tutor that adapts to, and interacts with students. This approach to online courseware represents a fundamental shift away from content management systems toward a holistic approach of instructional systems design.

Finally, this paper opens up numerous areas of new research. Whether the issue of acceptability is consistent across disciplines has yet to be tested. For example, do gatekeepers in the computer science and management of information systems professions have the same level of apprehension as health care professionals? By extension, are these findings consistent in other cultures or countries where distance education is more pervasive? Research into open issues such as these would provide greater insight into which of the factors revealed in the current research may be developed as consistent criteria that may, in turn, be used to advance the acceptability of online degrees.

Limitations

The statements used in the paired-comparison questionnaire and to compile the results of this report were not based on an exhaustive review of literature, news or other sources of information. The research was based on previous findings and qualitative statements made by the respondents who contributed to those research findings. The

methodology used in this report, then, clarified statements from previous findings drawn

from a limited pool of respondents in the health, business and academic professions. The

respondents were selected from an academic periodical that advertises job positions that are

limited to college and university settings and so the results might vary in different

professions. Given these considerations, the findings are exploratory, and as such, are not

conclusive.

TABLES AND FIGURES

Table 1.
Acceptability by gatekeepers of degrees earned online or partially online

Focus of acceptability	Residential	Combination	Online only
Graduate school	96 %	48 %	9 %
Academic professions	98 %	16 %	1 %
Business professions	96 %	27 %	4 %
Health professions	93 %	29 %	5 %
Mean	**96** %	**30** %	**5** %

Table 2.
Six statements drawn from content analysis

Access to a wide variety of online courses
Face to face classroom interaction with students faculty and experts
Mentored research teaching clinical or field experiences
Opportunity to work with new technologies
Program reputation for a rigorous curriculum
Social experiences associated with residential programs

Figure 1.
Example of a paired comparison question.

DIRECTIONS: In the follow pairs of statements, please select the **one in each pair** that you feel
contributes more to the quality of a university education.

Face to face classroom interaction with   *Opportunity to work with new technologies*
students faculty and experts

Table 3.
Weighted scale of gatekeeper statements pertaining to the acceptability of online degrees.

Index	
100	Face to face classroom interaction with students, faculty and experts
97	Program reputation for a rigorous curriculum
94	Mentored research, teaching. clinical or field experiences
37	Opportunity to work with new technologies
34	Social experiences associated with residential programs
0	Access to a wide variety of online courses

Table 4.
Categories highlighted with comments from respondents

Categories	Context
Face to face classroom interaction with students, faculty and experts	Evidence is needed that students gain as much from online courses as from face-to-face courses. I don't think online courses are a good thing for higher education. Education is about interpersonal interactions unless all you want to do is give out information and data for some lower level credential Degrees earned solely online do not convince me of a person's ability to work or interact with others. Personal skills. Letters of recommendation for an online student are highly suspect and limited. Academic honesty continues to be a problem as well.
Mentored research, teaching. clinical or field experiences	Online course and learning experiences can be very effective by must be augmented with quality mentoring by faculty. Such mentoring can only be truly effective with some face-to-face experiences either in conversation or field research. A rigorous curriculum, mentoring, face-to-face interactions between students and faculty may be preferred; it's just not the reality for the new generation of students and THEIR needs in remote areas and work schedules.
Program reputation for a rigorous curriculum	For online degrees to become acceptable they must lose their reputation as "easy" degrees without quality work attached to the degree. Long distance education also limits personal growth through isolated learning environments. The perception generally is that on-line courses are easier (not always in terms of the amount of work but in the level of knowledge or difficulty of work)

ENDNOTES

1. This paper presents the results of a nationwide survey of deans, associate deans and directors who make recommendations concerning the admission of applicants (who have completed a bachelor's degree) to graduate programs in their colleges and universities. A questionnaire was sent to a sample of academic officers in public and private institutions in the U.S. that described three different types of applicants. Each had a bachelor's degree in the relevant subject, good grades, GRE scores and letters of recommendation. However, one applicant had a bachelor's degree from a traditional institution, and had studied in the usual classroom and laboratory settings. A second applicant had also studied in a traditional institution, but had taken half of his or her courses for the degree online. The third applicant had been awarded a bachelor's degree in which all of his or her courses were taken over the Internet. The question addressed by the project is whether a bachelor's degree, earned partially or fully online is equally acceptable to those who recommend students for graduate admissions. The findings appear to indicate rather clearly that they are not.

2. A national survey was used to assess the acceptability of a job applicant's qualifications that included online coursework. The questionnaire was sent in response to position ads listed in the Chronicle of Higher Education and was returned by109 hiring committee chairpersons. The questionnaire described three applicants who earned degrees through a "traditional" institution, a "virtual" institution, and "mixed" coursework. The respondents were asked to select one applicant for the position and provide written explanations. The applicant with a traditional degree was preferred in two different hiring scenarios when compared to equally qualified applicants holding a "virtual" degree or a "mixed" degree (98% and 74% respectively). The respondents' comments revealed five categories of importance: experiences, institutional quality, face-to-face interaction, socialization and mentoring.

3. A national survey of hiring executives was conducted to assess the acceptability of a job applicant's qualifications for employment that included a degree earned solely online or one that included a significant amount of online coursework. The questionnaire was sent in response to job advertisements posted in newspapers in eight major metropolitan areas throughout the United States. It described three hypothetical applicants: One earned a degree through a ''traditional'' institution; a second obtained a degree solely online from a ''virtual'' institution; and a third obtained a degree by ''mixed'' online and traditional coursework. The question addressed by this study is whether a job applicant who has earned a bachelor's degree entirely or partially online has the same chance of being hired as one whose degree was completed through traditional coursework. The findings appear to indicate rather clearly that they are not.

4. A national survey of health care administrators was used to assess the acceptability of a job applicant's qualifications that includes a degree earned either online, partly online, or in a traditional program. A questionnaire was sent in response to job advertisements that were posted in newspapers from 38 metropolitan areas throughout the United States. The respondents were asked to select one of three applicants for an advertised position and provide written explanations. The applicant with a traditional degree was preferred over the applicant holding the degree earned online or partly online (95% and 71% respectively). A chi-square analysis revealed no statistically significant relationship between acceptability of the type of degree and the respondent's prior experience with online courses or their age ($p < .05$). A relationship between the acceptability of the degrees and the perception of whether health care issues can be taught online was found ($p < .001$). The respondents comments revealed that convenience and access were the positive aspects of online courses and a lack of

classroom experiences, face-to-face interaction, and mentored field experiences represent the biggest challenges.

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