Examining Graduate Students' Perceptions of and Preferences for Online Courses

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## Abstract

The purpose of this research was to: (a) explore graduate students' perceptions of and preferences for online credit courses; (b) analyze and compare this study's findings to those from previous research; and (c), based on findings, recommend further improvements to graduate online courses. Analysis of survey data from graduate students enrolled in online courses and comparison of responses with those in previous research indicated areas of improvement for online courses, including perceived importance of course interactions, less preference for online courses over face-to-face courses, and flexibility and convenience rather than effectiveness as advantages. We recommended that online course providers engage in more course interactions and assist students in attaining learning objectives and establishing peer networks and that researchers conduct evaluation studies that compare online and face-to-face course performance such as students' learning achievement in order to gain deeper insights into specific areas of improvement for online courses.

*Keywords*: graduate online courses, students' perception, students' preference

**1. Introduction**

The market moves according to customers' needs—so do institutions of higher education. The latter recently have undertaken major efforts to respond to a "customer" need—online courses as an alternative to classroom-based courses. More and more degree programs are offered in part or in their entirety through online options to undergraduate students as well as professionals seeking additional degrees. Further, many graduate schools are currently developing and/or planning to develop new online courses and transitioning from existing face-to-face courses to online versions.

One driver of this trend is based on recognition of graduate students' work/life/education balance. These students gain educational experiences and life-long learning by leveraging their learning style and situation while balancing their work and life. In other words, providing both quality courses and alternate access to class work definitely benefits students who juggle several balls and wish to make the most of educational opportunities. Institutions and faculty members seeking to better serve students' needs by offering online courses should know: (a) how graduate students perceive the quality of online courses, (b) whether they prefer them over face-to-face courses, (c) what they believe to be the advantages and challenges of online courses, and (d) how those perceptions and preferences differ according to students' demographic characteristics.

Among relevant studies, Young and Norgard (2006) were closest in examining the questions raised here. Thus, the current research involved a survey similar to theirs but distributed to a different group of students in a different timeframe. The reason for utilizing a similar survey was to enable investigation of commonalities and differences between this and the Young and Norgard study, to ensure enhanced external validity (Shadish, Cook, & Campbell, 2002) and identify specific features of these studies' findings. Also, in addition to asking

students to provide answers in predetermined question areas, this research sought to gather their thoughts in order to better understand the advantages and challenges of online courses.

In summary, the purpose of this research was to: (a) explore graduate students' perceptions of and preferences for online credit courses, (b) analyze and compare them to findings in Young and Norgard, and (c) recommend further improvements to graduate online courses based on study findings. In doing so, this research will provide researchers and online course providers with empirical implications while responding to recommendations in the referenced Young and Norgard research in terms of refining the survey and enhancing generalizability of findings.

## 2. Literature Review

The four main subjects of this research were initially examined through a literature review. Several things were clear after an initial examination of these studies. First, a handful had investigated students' perceptions of online courses. A clear, coherent, and consistent design of online courses was found to have a significant positive influence on students' perceptions of them (Edmons, 2010; Eichelberger, Hoffman, & Menchaca, 2008; Paechter, Maier, & Macher, 2010; Swan et al., 2000). Many participants believed that online course design is a critical element in their satisfaction as well as their learning.

Students' interaction with course content was also a frequently studied subject. Marks, Sibley, and Arbaugh (2005) identified the student-content interaction as one of the most important factors in learning online; Northrup (2002) also revealed that content interaction is an attribute that students perceived to be significant to their learning. The utilization of various pedagogical tools such as video clips and PowerPoint slides could be included in the student-content interaction(Marks et al., 2005).

Interpersonal interactions (i.e., instructor-student and/or student-student interactions) have been identified as significant influences on students' perceptions of online courses (Eichelberger, Hoffman, & Menchaca, 2008; Marks et al., 2005; Northrup, 2002; Swan et al., 2000). According to Marks et al. (2005), interactions between the instructor and students are most important in online learning; some interactions among students appear to be meaningfully associated with their learning experiences. Feedback from instructors and collaboration through continuous interactions with other students and/or instructors were specified as significant in many studies as well (see, e.g., Northrup, 2002; Swan et al., 2000).

Second, online courses and face-to-face courses have been compared by many researchers. One of the most frequently cited reasons for liking online courses is convenience (Daugherty & Funke, 1998; Harrington & Loffredo, 2010; Northrup, 2002; Swan et al., 2000; Young & Norgard, 2006), especially by students with work and family obligations. Timely responses from an instructor or sufficient interactions with instructors can be the reason that people choose online courses over face-to-face courses (Eichelberger, Hoffman, & Menchaca, 2008; Marks et al., 2005; Northrup, 2002; Swan et al., 2000). Innovative characteristics of online courses, such as media streaming, hyperlink, interactive web-forms and messaging tools, are also reasons for some people's preference for online courses (Harrington & Loffredo, 2010; Källkvist, Gomez, Andersson, & Lush, 2009; Northrup, 2002).

Third, many researchers have reported both advantages and challenges of online courses. In addition to convenience, many students have acknowledged that online courses have more flexibility than face-to-face courses (Daugherty & Funke, 1998; Northrup, 2002; O'Malley & McGraw, 1999; Swan et al., 2000). Students viewed flexibility as meaningful due to the opportunity for self-regulated learning (Daugherty & Funke, 1998; Northrup, 2002; O'Malley &

McGraw, 1999; Paechter et al., 2010; Yukselturk & Bulut, 2007), which seems to have a positive relationship with students' success in learning (Northrup, 2002; Yukselturk & Bulut, 2007).

Despite the various advantages of online courses, it is not uncommon for research to highlight weaknesses. In particular, the technical convenience of online courses that enables people to participate from a distance does not always guarantee frequent and satisfactory interactions between students and instructors. The issue of insufficient interactions with or support from instructors is readily found in the literature (Edmonds, 2010; Young & Norgard, 2006; Zhang & Perris, 2004), which  points to students' difficulty in achieving a shared understanding or establishing interpersonal relations (Paechter et al., 2010).

Lastly, some studies have examined the demographic characteristics of students who have had online course experiences. Females constitute the majority of participants (Edmonds, 2010, Harrington & Loffredo, 2010) in much of the research, although this does not necessarily indicate that female students are more likely to participate in online courses than males. Palmer and Holt (2009) found that female respondents generally rated their online learning experiences higher than did males and that graduate respondents were generally less satisfied with online learning than undergraduates. Billings, Skiba, and Connors (2005) reported on several differences in undergraduate and graduate students' perceptions of educational activities within online courses; no differences were found between the two groups with regard to technology use. In addition, graduate students rated student-faculty interactions lower than undergraduate students did although they spent more time on studying for online courses.

**3. Methodology**

Data were collected via a survey comprised of 17 closed-ended and two open-ended questions about perceptions of graduate online courses and preferences for online versus face-to-

face courses, followed by five demographic questions. Survey questions were based on the

questionnaire developed by Young and Norgard (2006) with those authors' permission since one

of this study's intentions was to compare that study with findings from this one and locate

similarities/differences between the two. The structure of and statements on the Young and

Norgard survey were revised slightly through iterative feedback processes involving both the

research team and an expert review process by three faculty members. The survey was

administered using Qualtrics Survey Research Suite (http://www.qualtrics.com), which is one of

the most powerful online survey tools.

*3.1. Population & Sample*

The study population was students currently enrolled in graduate schools, excluding those

in online universities, who were taking all or part of their credit courses online. Graduate

students enrolled in Adult Education (ADTED), Higher Education (HIED), and Workforce

Education and Development (WFED) programs at the Pennsylvania State University were

invited by email to participate in the survey. Of 364 students, 81 responded to the survey during

a two-week period in the spring 2012 semester, for a response rate of 22.3%. Demographically,

survey participants were all graduate students (no undergraduate students); the proportions of

male and older (46 years or more) respondents were higher in this study than in Young and

Norgard (i.e., 31% vs. 13.7% [gender] and 38% vs. 13.2% [age], respectively) (see Table 1).

Table 1

*Participant demographic information (n = 81)*

| Characteristics | Category (Proportion) |
| --- | --- |
| Gender | Male (31%), Female (68%) |
| Age | $\leq 45$ (61%), $\geq 46$ (38%) |

| | |
|---|---|
| Language | Native (80%), Non-native (20%) |
| Online course experiences | $\leq$ 4 courses (40%), $\geq$ 5 courses (60%) |
| Current enrollment status | Full-time student (43%), Part-time student (57%) |

*3.2. Variables*

      This survey asked 12 questions about the student's perception of graduate online courses, including course design, contents, and interaction; five questions on comparisons between online and face-to-face courses; and two open-ended questions to obtain further information on the advantages and challenges of online courses. Also, five demographic questions were asked to determine whether there were significant differences in students' perceptions of and preferences for online courses according to gender, age, language proficiency, online course experiences, and current enrollment status.

      To facilitate the comparison with the survey by Young and Norgard (2006), this survey also used a forced-choice 4-point rating scale format (*strongly agree, agree, disagree, strongly disagree*) throughout all multiple-choice questions in order to avoid ambiguous answers such as "no opinion" or "uncertain" (Friedman & Amoo, 1999).

*3.3. Analysis*

      *3.3.1. Quantitative analysis.* Descriptive statistics were analyzed to gain an overall understanding of graduate students' perceptions of and preferences for online courses and to compare them with findings from the Young and Norgard study. Further, the research team conducted an array of independent-samples *t* tests to see how students' perceptions and preferences differed according to dichotomously categorized demographic variables, including gender, age, language proficiency, online course experiences, and current enrollment status.

*3.3.2. Qualitative analysis.* An informal exploratory factor analysis was used to "subjectively evaluate", "simplify", and "reconstitute" (Lee, Mitchell, & Sablynski, 1999) participants' answers to open-ended questions about advantages and challenges of online courses. After reading through the answers, researchers identified pilot categories and assigned headings to answers; each statement was assigned a corresponding category; and pilot categories were refined and determined to better embrace all meanings of the answers.

## 4. Results

Graduate students' perceptions, preferences, and advantages and challenges of online courses were analyzed and presented as follows, in comparison with the reference research (Young & Norgard, 2006) when necessary.

Table 2

*Student perceptions of and preferences for online courses*

| | Response[a] | | Demographic difference[b] | | | | |
|---|---|---|---|---|---|---|---|
| | | % | G | A | L | O | C |
| *Online course design* | | | | | | | |
| The interface of my online courses is so user-friendly that I feel comfortable when navigating. | SA | 16.0 | | | | | |
| | A | 71.6 | | | | | |
| | D | 11.1 | | | | | |
| | SD | 1.2 | | | | | |
| The organization of my online courses is so well-structured that I feel comfortable understanding course contents, including lectures, assignments, due dates, and so on. | SA | 21.0 | | | | | 2.187[*] |
| | A | 65.4 | | | | | (.032) |
| | D | 13.6 | | | | | |
| | SD | 0 | | | | | |
| *Online course content* | | | | | | | |
| The materials in my online courses support the course goals. | SA | 32.1 | | | | | |
| | A | 63.0 | | | | | |
| | D | 4.9 | | | | | |
| | SD | 0 | | | | | |
| The assignments in my online courses help me master course content. | SA | 28.4 | | 2.359[*] | | | 2.529[*] |
| | A | 61.7 | | (.020) | | | (.013) |
| | D | 9.9 | | | | | |
| | SD | 0 | | | | | |
| The exams, projects, or final products in my online courses help me reach an | SA | 25.0 | | | | | |
| | A | 68.8 | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| accurate culmination of my knowledge of course content. | D | 6.3 | | | |
| | SD | 0 | | | |

*Online course interaction*

| | | | | | |
|---|---|---|---|---|---|
| Interaction between the instructor and students is essential to online learning. | SA | 63.0 | | | |
| | A | 28.4 | | | |
| | D | 7.4 | | | |
| | SD | 1.2 | | | |
| Interaction among students is essential to online learning. | SA | 42.0 | | | |
| | A | 45.7 | | | |
| | D | 11.1 | | | |
| | SD | 1.2 | | | |
| My online courses are set up so that I can interact with the instructor. | SA | 23.5 | -2.725$^*$ | | |
| | A | 67.9 | (.008) | | |
| | D | 7.4 | | | |
| | SD | 1.2 | | | |
| My online courses are set up so that I can interact with classmates. | SA | 43.2 | -2.938$^*$ | | |
| | A | 53.1 | (.008) | | |
| | D | 3.7 | | | |
| | SD | 0 | | | |
| The quality of interaction between the instructor and students in my online courses is high. | SA | 13.8 | | | 2.704$^*$ |
| | A | 58.8 | | | (.008) |
| | D | 22.5 | | | |
| | SD | 5.0 | | | |
| The quality of interaction among students in my online courses is high. | SA | 19.8 | | | 2.716$^*$ |
| | A | 50.6 | | | (.008) |
| | D | 22.2 | | | |
| | SD | 7.4 | | | |
| The materials in my online courses are valuable to course discussions. | SA | 25.0 | | | |
| | A | 66.3 | | | |
| | D | 8.8 | | | |
| | SD | 0 | | | |

*Online vs. face-to-face courses*

| | | | | | |
|---|---|---|---|---|---|
| I learn more in online courses than in face-to-face courses. | SA | 3.7 | -3.155$^*$ | | 3.775$^*$ |
| | A | 21.0 | (.002) | | (.000) |
| | D | 56.8 | | | |
| | SD | 18.5 | | | |
| Online courses require more study time than face-to-face courses (excluding commute). | SA | 25.9 | | | 2.190$^*$ |
| | A | 54.3 | | | (.031) |
| | D | 18.5 | | | |
| | SD | 1.2 | | | |
| Online courses are more difficult than face-to-face courses. | SA | 16.3 | | | |
| | A | 41.3 | | | |
| | D | 42.5 | | | |
| | SD | 0 | | | |
| I feel more comfortable participating in online course discussions than in face-to-face course discussions. | SA | 6.2 | | | 3.303$^*$ |
| | A | 17.3 | | | (.001) |
| | D | 55.6 | | | |
| | SD | 21.0 | | | |
| I prefer online courses to face-to-face courses. | SA | 6.3 | -2.550$^*$ | 2.082$^*$ | 4.642$^*$ |
| | A | 26.3 | (.013) | (.041) | (.000) |
| | D | 48.8 | | | |
| | SD | 18.8 | | | |

*4.1. Perceptions of Online Courses*

*4.1.1. Course design.* The two questions in this online course design cluster were determined through a major revision of the referenced questions (Young & Norgard, 2006), which were judged to be highly context-related questions. The internal consistency reliability of the two items in this cluster was .614.

For questions on the interface and organization of online courses, more than 86% had a positive perception (similar to Young and Norgard—88% agreement) with two (somewhat different) questions on course design. However, the positive percentage for this cluster was relatively less than that for clusters such as online course content and interaction, indicating that online course design is one area requiring further improvement in graduate online courses.

A significant difference in demographic information was not found for the course design cluster—again, similar to findings in Young and Norgard.

*4.1.2. Course content.* We revised one item in Young and Norgard's course content cluster, moving the focus from exams and assessment to products and the culmination of learning in an attempt to better reflect the main intent of graduate courses. The internal reliability for this cluster was .756.

Students' perceptions of online course content were positive with more than 90% agreement on all three question items. This indicates that students perceived the overall quality of online course content to be satisfactory (similar to Young and Norgard).

In terms of demographic statistical differences, older part-time students took a more positive stance toward the contribution of assignments to achievement of course objectives.

*4.1.3. Course interaction.* In order to complement the referenced questions, we added three more questions to the course interaction cluster. Specifically, because either student-instructor interaction or student-student interaction was asked in the referenced questionnaire, we inquired about both interactions on all items to ensure that the questions were clearer to respondents. Internal reliability was .711.

More than 90% in both studies agreed that interactions between the instructor and students were essential to online learning—more important than those among peers— and also were positive about course materials' effectiveness in course discussions. However, in our study only 70% of students agreed that interactions among students and instructors were of high quality, while 94% agreed that online courses are designed to be conducive to interactions; in Young and Norgard, the results for these issues were 78% and 87%, respectively.

Among the seven items in this cluster, two showed statistically significant differences between native and non-native English speakers, and two other items indicated differences between part-time and full-time students. Combining these findings, we see that English-speaking part-time students were more satisfied with the structure and quality of online course interactions, regardless of differences in gender, age, and online course experiences.

*4.2. Online vs. Face-to-Face Courses*

*4.2.1. Learning.* Over 75% of students believed they learned less in online courses than in face-to-face courses although more than 80% thought that they spent more time on online courses—these trends were consistent with but even more unfavorable for online courses than the compared research in which 58% said they learned less in online courses although 68% perceived they spent more time. With regard to the difficulty of online versus face-to-face courses, students' perceptions were divided in both surveys. While the overall perception of the

quality of graduate online courses was positive, continuous improvements are needed to keep them as "competitive" options to face-to-face courses.

More specifically, demographic comparisons between the two studies revealed that part-time students were more likely to believe they spent more time on online courses—excluding commuting time. The positive response rate to the question, "I learn more in online courses than in face-to-face courses", was significantly higher among native English-speaking part-time students than non-native full-time students. One possible interpretation is that part-time students spend more time working out course-related issues by themselves with little assistance from others compared to full-time students on campus and learn more during the probing process.

*4.2.2. Interactions.* Unlike the 55% in Young and Norgard, only 23% of the graduate students in our study felt more comfortable in online course discussions than in face-to-face course discussions. In other words, more than 75% of graduate students felt more comfortable in classroom discussions rather than online, which corresponded with Young and Norgard's results in which a greater number of older students felt that online discussions were more difficult than did younger students. The interaction component was confirmed again as the area most needing improvement in graduate online courses.

The finding that part-time students were more comfortable participating in online course discussions than were full-time students seemed to reflect, on the one hand, their lack of ease in class attendance and, on the other hand, their acclimation and contribution to the learning community in one of the most desirable manners of engaging in online learning.

*4.2.3. Preference.* Fewer than 35% of graduate students preferred online courses to face-to-face courses while 57% preferred online courses in the Young and Norgard study. This

finding is reasonable since those who feel they learn less from, spend more time on, and find engaging in online courses to be harder would be less likely to prefer them.

Looking at demographic differences, preferences for online courses were significantly higher among native English-speaking part-time students who had more online course experiences than non-native full-time students with fewer prior experiences. These findings indicate that full-time students are more inclined to engage in face-to-face courses and that those with more online course experiences have taken the courses because they preferred them for any reason. Additionally, native English speakers' greater preference for online courses is due less to language proficiency than to English speakers' greater probability of being a part-time student ($r_s$ = -.329, $p$ = .003).

*4.3. Advantages & Challenges of Online Courses*

The question about the advantages and challenges of taking online courses was asked as an open-ended question. Not surprisingly, some wrote very short answers such as "flexibility" while others wrote long answers. In the current study, the research team dissected, analyzed, and classified all individual answers into corresponding categories.

*4.3.1. Advantages.* The most frequent responses to questions about the advantages of graduate online courses focused on flexibility and convenience. Of 81 responses, time flexibility was stated by 63 respondents, location flexibility by 27, and both by 25. Most respondents preferred the fact that online courses allowed them to manage their own schedule and pace of study and helped balance study, work, and life. In terms of location flexibility and convenience, the ability to study anywhere, cost savings from avoiding a commute, and local accessibility of necessary courses were most often cited. One respondent summarized these advantages: "saved travel time, cost of lodging, can do course work from anywhere an Internet connection can be

made, allows for more family time, safer for those traveling long distances in bad weather or

may fall asleep driving, and better for busy professional who travel."

More and richer interactions were cited as an advantage by nine respondents. Students

felt encouraged to participate in course interactions and reflect on others' thoughts and opinions.

Some also answered "openness, safe, freedom to speak without inhibitions", "participation

without fear of being shut", and "good for those who have language challenges and introverts" as

advantages.

Independent study was pointed to as an advantage by eight respondents. Individual

responsibility, self-motivation, and autonomy in learning were noted.

Along with these three major advantages, several content-related advantages were stated,

including the ability to revisit content, reference-grounded content, project-based content, and

more effectiveness in certain courses than in face-to-face courses.

*4.3.2. Challenges.* The most frequent answer to the question of challenges in online

courses focused on course interactions. Unlike respondents with a positive view of online course

interactions, a lack of peer/instructor interactions and insufficient opportunities to learn from

others and build social networks were perceived as major challenges in online courses by more

than 60% of respondents. In other words, the needs for "real-time conversations", "in-depth

discussions", "personal connections", "casual support", and "some kind of community" were

cited. One respondent described this challenge by stating "hard to learn from others, hard to

establish relationships with colleagues, learn less from people but more from contents"; another

noted "the lack of free flow conversation that can result in 'aha' moments; and another stated in

a more metaphorical fashion, "impossible to gain insight into the instructor or our classmates

through a keyboard and monitor".

Next to course interaction, the quality of online courses in terms of content, design, and instructor was perceived as a challenge by 21 respondents. Specifically, some pointed to difficulties in understanding content and the weak packaging of content materials; some complained about heavy workload and poorly designed content delivery and conversation; and some needed more instructor involvement and help.

Independent time and learning management in online courses were mentioned as a challenge by 17 respondents—the opposite of opinions expressed by eight participants who described the advantages of online courses. Several students believed that management of time and due dates as well as self-motivation were a greater responsibility for individual learners. One student stated, "just finding a good balance to do everything and do it well".

Other challenges of online courses included difficulties in working together on group projects and various technical issues. In addition, there was an interesting two-word phrase that might be interpreted as an issue of peer/instructor interactions, of time management, or of technology, which was "keeping connected".

## 5. Discussion

No significant gender and online course experience differences were found in any area examined in this research. Rather, age and enrollment status differences were identified in relation to course content, and language and enrollment status differences in course interactions. Most commonly in the demographic comparisons, part-time graduate students had a more positive perception of online courses, implying their practical needs and agile adaptation. Also, consistently shown in students' preference for online courses were significant differences in enrollment status. Part-time students were found to invest more time, engage more, and learn more in online courses, which could point to their commitment and contribution to learning

processes. All in all, online courses offer a valuable opportunity to self-directed life-long learners who strive to balance their study, work, and life.

On the other hand, attention should be paid to two findings: only 23% of graduate students felt more comfortable in online course discussions than in face-to-face course discussions, and less than 35% preferred online courses to face-to-face courses. These percentages are lower than those reported in Young and Norgard and very discouraging for those offering online courses. Concerns increase as continuous advances in online course technologies and instructional design are taken into account, suggesting that online course providers should look at whether the advances are oriented toward customers' successful learning experiences.

In the same vein, participants' answers to open-ended questions on advantages and challenges of online courses have important implications. Participants mentioned flexibility and convenience most frequently as advantages of online courses while relatively few referred to course interactions and independent study, which can be interpreted that graduate students' perceptions of online courses were often based on secondary rather than essential features. This interpretation was cross-confirmed in students' responses to the question about challenges in taking online courses—they pointed to the ineffectiveness of course interactions, content and design, and self-directed learning. This finding requires online learning researchers to make more concerted efforts to identify remedies for weaknesses and leverage unique features such as self-directed learning and creative content design so that online courses may be viewed as effective alternatives to face-to-face courses in higher education.

## 6. Recommendations

Graduate online course providers (i.e., graduate schools, faculty members) should consider interacting more in online courses and help students secure appropriate assistance and

resources in order to attain learning objectives. For their part, graduate students should be encouraged to establish a learning community with peers to foster ongoing learning partnerships during the course and thereafter. One intuitive but effective option noted by several respondents would be to consider a hybrid format that encompasses advantages of online and face-to-face courses. Also, when preparing new online courses or planning to transition face-to-face courses into online formats, developers and instructors should take into account students' comments on online courses that they spend more time, learn less and feel forced to participate in course discussions that rarely provide "aha experiences". Creative strategies to better engage students with course content and with peers and instructors are needed—their presence will enable online courses to be more than flexible and convenient learning options. .

With regard to future studies, evaluation research should further compare the performances of online and face-to-face courses. While this research examined students' reactions to two types of graduate learning experiences by asking for perceptions and preferences, deeper insights may be gained about specific areas of improvement if a one-on-one comparison is conducted between online and face-to-face courses. This comparison would measure degrees of learning achievement and examine contributing factors to achievements after completion of each course. Certainly, more empirical research on demographic differences is always necessary to further customize the services offered in online courses.

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