

Student Perceptions of Online Learning: A Comparison of Two Different Populations

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Abstract

Some institutions of higher learning are being pressured to implement online learning classes as part of their traditional degree programs for a variety of reasons. A major concern in using the online format with a group of traditional college students, who have little or no experience with online learning, is the accuracy of their perceptions of online courses and the impact of those perceptions on learning. In this pilot study we looked at how perceptions about online learning differ in students who have participated in prior online courses from those who have not participated in online courses. Among others, we looked at the following expectations: level of performance, amount of time required, level of interaction, and depth and breadth of content coverage. The findings are discussed in the context of adult learning theory.

Keywords: Student perceptions, online learning, online education, online writing, technical writing, Internet course, curriculum

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A sea of forces is pressuring academics to rethink the way education is delivered: shifts in enrollment, the proliferation of diverse populations, political factors, and economic considerations. Simultaneously, the evolution of technology has enabled corporations and academic institutions alike to utilize a repertoire of tools in varied and creative ways—E-commerce to facilitate sales and marketing, research via the Web, Intranets, groupware, and E-mail communications technologies. Perhaps, the most dramatic impact for the education community "... is the exponentially increasing demand by legislators and administrators for educators to implement distance learning technology as a mainstay of the new millennium curricula." (Winsboro, 2002).

Additionally, some institutions of higher learning in the New York City Metropolitan area have been compelled to increase online course offerings in the wake of the 9/11 tragedy due to potential declining enrollments in their traditional face-to-face classes. However, a number of questions must be addressed: How will the online format impact students' learning? What are the effects of student preparation and level of maturity on online learning? How do perceptions about online learning differ in students who have participated in prior online courses from those who have not participated in online courses? In short, given that this relatively new mode of instruction presents new challenges, how will educators ensure the success of the online learner?

1. BACKGROUND

In order to provide opportunity and flexibility for Pace University students in a multi-campus environment and because of our expertise in teaching technical writing in an asynchronous online degree program, we were asked to develop and teach the same technical writing course online within a traditional, face-to-face four-year degree program. A major concern in using the online format with a group of traditional college students, who had minimal or no experience with online learning, was the accuracy of their perceptions of online courses and the impact of those perceptions on learning. We were not only concerned about course design but about the students' potential for success using this mode of instruction. To prepare, we read the related literature, which revealed the characteristics of the successful online learner. The online learner must be motivated and self-directed, needs support services, and requires a social context for learning, i.e. learning community (White & Weight, 2000, pp. 41-44). Building a learning community via the Web requires building a high degree of interactivity into the course, which results in enhancing the learning experience and producing a more satisfying outcome for the facilitator and students alike (Palloff & Pratt, 2001, pp. 152-153). Adult learning theory, or *andragogy* (a term attributed to Malcolm Knowles), would, therefore, appear to be a perfect match with online course delivery. In the adult

learning environment, students are encouraged to "discover learning, rather than just (absorb) didactic information dissemination" (Lee, 1998, p. 52) and to become independent and self-reflective learners. Additionally, this pedagogical approach "fosters self-direction, critical thinking, and purposeful reflection as students work in a participative . . . learning environment" (Caouette & Feather, 2000, p. 712). Although slightly different definitions exist, a 1996 study conducted by the College Board defined the adult student as a learner over the age of 25 who holds a full-time job. Adult learners engage in educational opportunities for various reasons, such as upskilling/retooling, career mobility, employer demands, or for the sheer joy of learning.

Educators have begun to recognize andragogical instructional methods that are student centered in the traditional classroom. These approaches are relevant to the online classroom, even if the students are *not* adults since online learning takes considerable self-discipline and organization and requires a high level of maturity (White & Weight, p. 34). At the same time, more and more traditional-age college students are taking online courses as they are faced with balancing their work and class schedules (Schweizer, 1999, p. 100).

2. THE TWO POPULATIONS

Two-Year Degree Asynchronous, Online Learners

This unique population consists of adult learners from geographically disparate areas, who are full-time telecommunications workers enrolled in an online technical degree program.

Four-Year Degree Traditional, Face-To-Face Learners

This population consists predominantly of younger, traditional college-age learners in the same geographic area enrolled in a face-to-face technical degree program.

For the remainder of this paper, we refer to the two-year degree asynchronous_online learners as *online learners* and the four-year degree traditional, face-to-face learners, who were unaccustomed to online course delivery, as *face-to-face learners*.

3. PURPOSE OF THE STUDY

The purpose of this pilot study was to determine how student perceptions of online learning differed in two populations: one group enrolled in an asynchronous online degree program, the second group enrolled in a traditional face-to-face program. The preliminary findings from this pilot will serve as a point of departure for longitudinal research of student perceptions of online learning in different populations. We specifically wanted to know if the following student expectations about online learning were realistic in terms of:

- Level of performance
- Amount of time required to study
- Level of interaction with instructors and other students
- Depth and breadth of content coverage
- Effectiveness of the technology for online communication
- Student satisfaction with independent course work

4. THE METHODOLOGY OF THE STUDY

To collect data focusing on student perceptions of online learning, we developed and administered pre- and post-course electronic surveys to both student populations. The pre-course survey was designed to compare some demographic characteristics (age, gender, educational characteristics, employment status), student perceptions of online learning (amount of time spent on course work, level of performance, level of interaction, effectiveness of technology for communication, depth and breadth of content coverage), and student satisfaction with independent course work. The pre-course instrument consisted of 15 questions--4 questions dealt with demographics and the remainder focused on perceptions of online learning. We also added two open-ended questions at the end of the survey to allow students to elaborate on their perceptions of the online learning experience. Each of the nine items focusing on perceptions included a 5-point Likert-type scale with a midpoint neutral response. The post-course instrument contained only the nine items covering perceptions of online learning. A panel of experts reviewed the surveys after which we rephrased and eliminated or added questions. (See Appendix for a copy of the final survey.)

A total of 51 students from the two courses were asked to complete the pre-course survey during the first week of class, and the post-course instrument was administered in the last week of the course before final grades were calculated. Thirty-five responses were received, for a response rate of 68.6% (35/51). After data collection, we cycled through the responses to divulge similarities and differences between the two student populations.

5. SUMMARY OF DATA

The following section describes our findings illustrated in table format, beginning with demographics information followed by student perceptions of online learning.

Student Demographics

Age

Table 1. Age of Learners

Face-to-face Learners		Online Learners	
76%	between 17 – 25	7%	between 17 – 25
16%	between 26 – 35	28%	between 26 – 35
8%	36+		36+

The majority of the face-to-face group fell within the traditional college-age range—76% were below the age of 26. The majority of the online group fell within the age range of those defined as adult learners—93% were 26 or older.

Employment Status and Educational Characteristics

Table 2. Number of hours students work each week

Face-to-face Learners		Online Learners	
44%	between 21 – 40+	100%	between 21 – 40+

Table 3. Number of credits students were taking during the semester

Face-to-face Learners		Online Learners	
28%	between 1 – 11	100%	between 1 – 11
72%	12+	0%	12+

Table 4. Number of prior online courses taken

Face-to-face Learners		Online Learners	
84%	0	7%	0
16%	1-2	7%	1-2
0%	3+	85%	3+

All of the online students were full-time employees and part-time students, whereas the majority of the face-to-face students were full-time students who worked 20 hours per week or less. The majority of the students in the online program (92%) had taken prior online courses, while only 16% of the face-to-face students had taken an online course prior to this one.

Student Perceptions of Online Learning

The following tables titled with the pre- and post-course survey questions illustrate findings related to student perceptions of the online experience. Note: In tables where a second question is not listed, the same question was posed on both the pre- and post-course surveys.

Table 5. How well do you expect to do in the online class?

Pre-Course Survey		Post-Course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
70% Somewhat to very well	100% Somewhat to very well	77% Somewhat to very well	81% Somewhat to very well

Table 6. If this course were taught in a traditional face-to-face classroom how well would you expect to do?

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
99% Somewhat to very well	93% Somewhat to very well	88% Somewhat to very well	83% Somewhat to very well

We wanted to know if the face-to-face students expected to do as well in an online format as in a face-to-face class and how their perceptions compared with those of the online students. When asked how well they expected to do in the online class, 100% of the online students expected to do well in the online environment, and 93% felt they would do well if the course were taught in a traditional, face-to-face classroom. Of the face-to-face students, 70% expected to do well in the online environment; however, more (99%) felt they would do well if the course were taught in a traditional, face-to-face classroom.

At the end of the course, 81% of the online group felt they did well and 83% felt they would have done well if the course had been taught in a traditional, face-to-face environment. Of the face-to-face group, 77% felt they did well in the online class; however, more (83%) felt they would have done better in a traditional, face-to-face class.

Table 7. How many hours do you expect to devote to this online course each week? (Pre-course question) How many hours did you devote to this online course each week? (Post-course question)

Pre-Course Survey		Post-Course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
21% 10+ hours 66% 6 – 9 hours 12 % Less than 6 hours	28% 10+ hours 65% 6 – 9 hours 7% Less than 6 hours	27% 10+ hours 59% 6 – 9 hours 14% Less than 6 hours	28% 10+ hours 63% 6 – 9 hours 8% Less than 6 hours

Table 8. How many hours would you expect to devote to this course if it were taught in a traditional classroom (including class time)?

Pre-Course Survey		Post-Course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
16% 10+ hours 63% 6 – 9 hours 21% Less than 6 hours	21% 10+ hours 57% 6 – 9 hours 21% Less than 6 hours	27% 10+ hours 54% 6 – 9 hours 18% Less than 6 hours	26% 10+ hours 54% 6 – 9 hours 19% Less than 6 hours

We wanted to know how much time students felt they would need to study for this online course. The majority of both populations expected to and did devote between 6 – 9 hours each week to this course. Twenty-one percent of both groups expected to spend less time studying for this course if it were taught in a traditional face-to-face class.

Table 9. How much do you enjoy working independently?

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
92% Somewhat to Really Enjoy	100% Somewhat to Really enjoy	95% Somewhat to really enjoy	91% Somewhat to really enjoy

We asked these students how much they enjoyed working independently. Initially, 100% of the online group and 92% of the face-to-face group indicated that they enjoyed working independently. At the end of the course, these percentages changed somewhat, with 95% of the face-to-face group and 91% of the online

group reporting that they enjoyed working independently.

Table 10. How much opportunity will there be to interact with classmates in an online course? (Pre-course question)

How much opportunity was there to interact with classmates in the online course? (Post-course question)

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
50%	78%	23%	73%
Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree
37%	14%	68%	9%
Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree

Table 11. How effective is technology, such as email, for communicating with classmates and instructors? (Pre-course question)

How effective was technology, such as email, for communicating with classmates and instructors? (Post-course question)

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
87%	93%	82%	82%
Somewhat to very effective	Somewhat to very effective	Somewhat to very effective	Somewhat to very effective
8%	0%	14%	0%
Somewhat to very ineffective	Somewhat to very ineffective	Somewhat to very ineffective	Somewhat to very ineffective

We wanted to determine if students felt the online course would provide adequate opportunities for students to interact with one another and if they felt the technology would be effective in communicating with their classmates and instructors. The majority of the online group (78%) initially felt that there would be ample opportunity to interact; however, only 50% of the face-to-face group agreed that they would have adequate opportunity for interaction. At the end of the course, even fewer face-to-face students (23%) felt they had adequate opportunity to interact with their classmates, while the majority of the online group (73%) agreed that there had been adequate interaction.

The majority of both the face-to-face group (87%) and the online group (93%) felt at the beginning of the course that technology was effective for communicating with one another and the instructors.

At the end of the course, those percentages were somewhat lower (82% for both groups).

Table 12. Will this course cover as much material as a traditional course? (Pre-course question)

Did this course cover as much material as a traditional course? (Post-course question)

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
79%	86%	73%	82%
Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree
8%	0%	27%	9%
Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree

Table 13. Will this course cover the material with as much depth as a traditional course? (Pre-course question)

Did this course cover the material with as much depth as a traditional course? (Post-course question)

Pre-course Survey		Post-course Survey	
Face-to-face Learners	Online Learners	Face-to-face Learners	Online Learners
75%	86%	55%	82%
Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree	Somewhat to strongly agree
12%	0%	41%	9%
Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree	Somewhat to strongly disagree

We asked students at the beginning and end of the course whether they felt the online course would cover the material with as much breadth and depth as a traditional course. The majority of the students in both groups, face-to-face (79%) and online (86%), felt that the online course would cover as much material as a face-to-face course and that the material would be covered in as much depth, 86% of the online group agreed and 75% of the face-to-face group agreed.

Two open-ended questions were included: What do you think you will enjoy the most about taking this course in an online environment? What do you think you will enjoy the least about taking this course in an online environment?

The students in both groups felt they would enjoy the flexibility and convenience of online learning:

You can access the class at your convenience and your class is wherever your computer is.

I can study for this class on my own time and not have to worry about going to class.

A number of students in the face-to-face group also felt they would enjoy the new experience of learning online:

I think I will be able to enjoy the new experience of doing an online course for the first time.

I have never taken an online course before, so I am excited about all aspects of it.

The most common concerns in both groups are the lack of face-to-face interaction with classmates and instructors and the ability to meet deadlines. A number of the face-to-face students were also concerned about learning independently, rather than being taught by an instructor. They also expressed concern about an increased workload.

The main drawbacks of taking an online class include the absence of personal interaction with fellow classmates and actual instruction from the professor.

The thing I would enjoy the least is there would be a lot of extensive reading compared to an in-class session. You have to be independent and know how to pace your own time to complete all the assignments.

6. PRELIMINARY CONCLUSIONS

Online learning provides many more educational options and access to life-long learning for our students; however, many students are new to the online learning environment, an environment that can be challenging and intimidating for some. It is essential to understand what perceptions our students bring to the online classroom, so that we can provide an environment in which they can be comfortable and successful online learners.

The findings of this study suggest that the face-to-face students were less confident than the online students in their ability to succeed in the online format and felt they would do better in a traditional classroom setting with fewer than $\frac{3}{4}$ of the population (70%) expecting to do somewhat to very well before the course and slightly more than $\frac{3}{4}$ of the population (77%) when polled at the end of the course before grades were assigned. (See Table 5.) In contrast, the online group had very high expectations as to its success in the online course (100%) at the beginning of the course, but at the end of the course (before grades were

assigned), expectations diminished somewhat (81%). With the face-to-face group, we wondered whether they indicated a slight increase in expectations, because of their initial nervousness about taking an online course, which might have diminished over time. With the online group, perhaps, the level of difficulty of the course was not anticipated, so expectations as to success diminished during the course of the semester.

Additionally, fewer face-to-face students, who were accustomed to taking classes in a traditional classroom, (50% versus 78% for the online learners) felt there would be a sufficient amount of interaction among their classmates in the online class. At the end of the course a majority (68% versus 37% at the beginning of the class) of the face-to-face students indicated that there was not enough opportunity to interact with classmates in the online format. This could be the result of the level of familiarity with the online learning environment, since most of the face-to-face students had no prior experience with online learning and received no orientation to the medium. Conversely, the two-year online program requires that students participate in an online seminar, whose purpose is to acquaint students with online course delivery and instill confidence in using the tools inherent in the online software. The level of maturity of the face-to-face student, the majority of whom were below the age of 26 (not adult learners as defined by the College Board), might also have impacted this category.

The expectations of both groups concerning the amount of time needed for the online course seemed to be realistic; however, several student comments from the face-to-face group reflected a concern about an increased workload in the online environment, which would again support the students' initial nervousness about taking a course using this mode of delivery.

We found very little difference between the groups as related to their enjoyment of working independently, a trait that is essential for success in the online class. With the face-to-face students, their enjoyment of working independently increased minimally over the course of the semester (92% versus 95%); the online students indicated a slight decrease in their level of enjoyment of independent work over the course of the term (100% versus 91%). As the percentages reflected only slight differences, we cannot come to a concrete conclusion as to the impact this might have had on the students' online experiences in this course.

The majority of both groups felt that the technology would be (pre-course) and was (post-course) effective for communicating with their classmates and instructors. This could be because communication technologies, such as email, are in common use in today's workplace, home, and classroom. Both adults and younger students embrace such technologies and

perceive them to be effective means of communication.

There is a concern as to whether learning in an online classroom is perceived to be as valuable as learning in a face-to-face classroom, i.e. does the course adequately cover the material? A majority of both the online group and the face-to-face group felt the online course would cover the material with as much breadth and depth as a traditional course. We noted that the face-to-face group, however, at the end of the course felt less strongly (75% versus 55%) that the online course covered the material with as much depth as a traditional course would. This might indicate a preference for taking courses in a traditional classroom.

7. FUTURE DIRECTIONS AND REFLECTIONS

As this was a pilot study to serve as a point of departure for a longitudinal investigation of differences in student populations who engage in online learning, we plan to fine-tune our pre- and post-course surveys. Although a panel of experts reviewed our surveys, some of the responses we received might indicate a need to rephrase or add new questions. Moreover, as each group seems to have its own characteristics, with its own qualities and frailties, it will be important for us to research populations over time to reach any concrete conclusions. Additionally, we will conduct a thorough review of the related literature to compare and contrast our findings and make recommendations.

Both of us are experienced online teachers and learners, having taught in an asynchronous online degree program for several years as well as participating as students in a number of online workshops. We recognize that online learning is not a panacea but does offer educational opportunities to people of all ages, with different needs, at any time or place and is increasingly looked upon as an opportunity to provide ongoing education for both our adult and traditional college-age students. Our students need to be prepared for this mode of learning, however. The findings of this study suggest that our traditional, face-to-face students would benefit from an orientation to the online learning format, perhaps in the form of a pre-course, online workshop, as well as careful academic advisement.

We also realize that a completely online asynchronous course might not be conducive to each student's approach to learning. Offering hybrid courses might provide an attractive solution to the less mature learner, for example. Face-to-face class meetings periodically throughout the semester might provide the opportunity for the less mature student to succeed by lending enough support to offset the "loneliness of the distance learner." Additionally, if the success of the online learner is consistent with adult learning

theory/teaching approaches as our initial review of the literature would suggest, it will be critical to transfer these techniques to an online format using a variety of learner-directed activities.

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9. APPENDIX

Pre-Course Survey

Instructions: All responses are anonymous. Please answer these questions as accurately as you can.

- Question 1:** What is your age?
- 17-20
 - 21-25
 - 26-30
 - 31-35
 - 36-40
 - 41+
- Question 2:** How many hours do you work per week?
- 0 hrs
 - 1-20 hrs
 - 21-40 hrs
 - 40+ hrs
- Question 3:** How many credits are you taking this semester?
- 1 to 6
 - 7 to 11
 - 12 to 16
 - 17 to 20
 - 20+
- Question 4:** How many prior online courses have you taken so far?
- 0
 - 1
 - 2
 - 3
 - 4+
- Question 5:** How well do you expect to do in this online class?
- Very well
 - Somewhat well
 - No opinion
 - Somewhat poorly
 - Very poorly
- Question 6:** If this course were taught in a traditional classroom format, how well do you believe you would do?
- Very well
 - Somewhat well
 - No opinion
 - Somewhat poorly
 - Very poorly
- Question 7:** How many hours do you expect to devote to this course each week?
- 12+ hrs
 - 10-12 hrs
 - 6-9 hrs
 - Less than 6 hrs
- Question 8:** If this course were taught in a traditional classroom format, how many hours would you expect to devote each week (including class time)?
- 12+ hrs
 - 10-12 hrs

- 6-9 hrs
- Less than 6 hrs

Question 9: How much do you enjoy working independently?

- Really enjoy
- Somewhat enjoy
- No opinion
- Somewhat dislike
- Really dislike

Question 10: Do you feel that you will have as much opportunity to interact with your classmates in this course as in a traditional course?

- Strongly agree
- Somewhat agree
- No opinion
- Somewhat disagree
- Strongly disagree

Question 11: How effective do you feel technology such as email, chat rooms, or discussion forums is in communicating with fellow students and instructors?

- Very effective
- Somewhat effective
- No opinion
- Somewhat ineffective
- Very ineffective

Question 12: Do you feel that this course will cover as much material as a traditional course?

- Strongly agree
- Somewhat agree
- No opinion
- Somewhat disagree
- Strongly disagree

Question 13: Do you feel that this course will cover the material with as much depth as a traditional course?

- Strongly agree
- Somewhat agree
- No opinion
- Somewhat disagree
- Strongly disagree

Question 14: What do you think you will enjoy most about this online course?

Question 15: What do you think you will enjoy least about this online course?