

Factors Influencing Completion and Noncompletion of Community College Online Courses

Steven R. Aragon

University of Illinois at Urbana-Champaign

Elaine S. Johnson

Illinois Community College Board

Abstract: This study investigated the differences between demographic, enrollment, academic, and self-directed learning characteristics of completers and noncompleters in online courses at one community college. The study also obtained students' self-reported reasons for not completing their coursework. No significant differences were found in the characteristics of age, gender, ethnicity, financial aid eligibility, grade point average, and total hours enrolled; significant differences were found in gender, academic readiness, and completers enrolled in more online courses than noncompleters.

Many research studies have been conducted on learners' persistence in distance education, according to Lim (2001), but there is very little information available on adult learners in Web-based distance education in comparison with adult learners in other types of distance education. Wiggons (2000) states that research needs to be undertaken that examines the percentage of online student withdrawals versus online student persisters.

Breslin (2001) reported that as community colleges and universities turn increasingly to Web-based learning, many are confronting an unforeseen problem: students dropping out of the high-tech classes. Some community colleges are reporting dropout rates 20% higher than in face-to-face classrooms. The rapid growth of online classes and cyberlearners has presented a need for research to determine the characteristics of completers and noncompleters in online courses.

According to Maxwell et al. (2003), community colleges lack knowledge of who is enrolling in online courses. Despite awareness at both the national and

local levels that online course drop rates tend to be higher than in comparable face-to-face courses, there is little knowledge of enrollment patterns associated with online courses (Frankola 2001). Describing this student population is important to help guide institutions in developing and maintaining adequate and appropriate student support services (DeTure 2004; Dupin-Bryant 2004; Halsne and Gatta 2002; Schmid and Abell 2003) and tailor the support systems to fit the needs of the individual students at their particular institutions (Dupin-Bryant 2004; Habley and McClanahan 2004).

PURPOSE AND RESEARCH QUESTIONS

The purpose of this study was to investigate the differences in demographic, enrollment (hours enrolled), academic, and self-directed learning characteristics between students who complete and those who do not complete online courses. In addition, the study identified the self-reported reasons for noncompletion of online courses. The following questions provided the focus for the study:

1. Is there a significant difference in demographic characteristics, enrollment (hours enrolled) characteristics, academic readiness, and self-directed learning readiness between students who complete and do not complete online courses?
2. What are the self-reported reasons for student noncompletion of online courses?

For this study, course completion was defined by a grade of A, B, C, or D. Course noncompletion was defined by a grade of F, Dr for drop, W for withdraw, or I for incomplete. Students were identified as completers if they completed one online course. Demographic characteristics were defined as age, gender, ethnicity, and financial aid eligibility. Academic readiness characteristics were defined by reading, writing, and mathematics placement as measured by the Compass and Asset tests and grade point average. Self-directed learning variables were defined by student measurement scores derived from the Bartlett-Kotrlík Inventory of Self-Learning (BISL) (Bartlett and Kotrlík 1999).

METHOD

Research Design

This study used a combination of comparative and survey designs. Research Question 1 utilized a comparative research design. Research Question 2 was answered by using a survey design. The researcher compiled the self-reported

reasons from students as to why they chose not to complete their online courses. Students were contacted via the telephone to obtain information concerning course noncompletion.

Participants

The sample for the study consisted of 305 students from a rural community college located in the midwestern United States. Students enrolling and completing a survey from the first day of registration through the tenth day were included in the study. Using the criteria presented earlier, a total of 189 students were course completers and 116 were noncompleters.

Of the 305 completers and noncompleters, the mean age of the students was twenty-eight ($SD = 9.91$). The enrollment consisted of 216 females (71%) and 89 males (29%). There were 248 white students (81%) and 57 nonwhite students (19%). A total of 128 students received federal financial aid assistance. On the tenth day of the semester, the mean hours of enrollment were 9.34 ($SD = 5.30$). Student grade point average (GPA) was calculated for all postsecondary semesters prior to spring 2002. Student GPAs ranged from 0 to 4.00, with the mean GPA being 2.16 ($SD = 1.58$) on a 4.0 scale.

Procedures

Student Demographic, Enrollment, Academic Readiness, and Course Completion Variables. All student demographic, enrollment, academic readiness, and course completion data were housed in the college's Management Information System. The appropriate variables were queried and subsequently downloaded into an Excel database. This database was imported into the Statistical Package for the Social Sciences (SPSS) for further analysis.

Self-Directed Learning Readiness. The self-directed learning readiness scores were derived from the results of the BISL. The self-directed learning score is a continuous variable measuring personal, social, and environmental aspects of self-directed learning. The score is interpreted as strongly not self-directed, moderately not self-directed, slightly not self-directed, low self-directed, slightly self-directed, moderately strong self-directed, and strongly self-directed. The assessment of the BISL instrument was conducted online as part of the WebCT tutorial program that each online student completed prior to starting an online course.

Student Noncompleters. Additional information was obtained from those students who did not complete any of their online courses. Attempts were made to contact all noncompleters via telephone during morning, afternoon,

and evening hours. A minimum of three phone calls were made to reach each student. Students were reminded of the study and asked the following question: “Why did you choose not to complete your online course?”

Data Analysis

Chi-square was used to address Research Question 1, which sought to determine whether there were significant differences between the student characteristics (gender, ethnicity, financial aid eligibility, and academic characteristics) of completers and noncompleters in online courses. For the continuous student characteristic variables of age, hours enrolled, hours enrolled in online courses, GPA, and self-directed learning, a *t* test was conducted to compare the means of completers and noncompleters in online courses.

Correlation coefficient was used to determine the degree of covariation between student characteristics and completion and noncompletion in online courses when a significant difference was found as a result of the chi-square and *t* tests. The Pearson product-moment correlation coefficient provided a numerical summary of the strength and direction of the linear relationship of the selected student demographic, enrollment, academic, and self-directed learning independent variables.

Content analysis was conducted to analyze the data collected from the students who did not complete their online courses (Research Question 2). The researcher obtained responses from 65 of the 116 (56%) students who were identified as noncompleters in online courses. Of the 51 students not contacted, 24 had disconnected or incorrect phone numbers, and 27 would not answer the phone or return phone messages. Because it was not possible to talk to 100% of the students, chi-square and *t* test analyses were conducted to determine the degree of homogeneity of variance on demographic characteristics of contacted and noncontacted students. No significant difference was found in the characteristics of age, gender, ethnicity, financial aid eligibility, GPA, and total hours enrolled.

RESULTS

Student Demographics

Age. No significant difference was found between completers ($M = 28.98$, $SD = 9.47$) and noncompleters ($M = 27.71$, $SD = 10.58$), $t(303) = 1.09$, $p = .28$.

Gender. The relationship of gender to completion of online courses showed a significant association, $\chi^2(1, N = 305) = 5.64$, $p = .02$. The percentage of course completion by females was 66%, compared with a 52% completion

rate by males. As indexed by a Pearson correlation, the strength of the relationship was $-.14$. Using Davis's (1971) descriptors for interpretation, this is considered a low negative correlation. Consequently, even though a significant difference between the groups was present, the difference is small.

Ethnicity. Ethnicity was defined as white and nonwhite. A chi-square test to examine the relationship of ethnicity to completion of online courses showed no significant association, $\chi^2(1, N = 305) = .49, p = .48$.

Financial Aid Eligibility. Students were defined as either applied for and eligible for financial aid or not applying for and not receiving financial aid. A chi-square test to examine the relationship of financial aid eligibility to completion of online courses found no significant association, $\chi^2(1, N = 305) = .03, p = .87$.

Enrollment Characteristics

Hours Enrolled. Results found that completers ($M = 4.32, SD = 2.63$) enrolled in more online courses than noncompleters ($M = 1.48, SD = 2.48$), $t(303) = 9.33, p = .000$. As indexed by a Pearson correlation, the strength of the relationship was $.47$. Using Davis's (1971) descriptors for interpretation, this is considered a moderate difference.

Academic Readiness

Placement in Developmental Courses. The data presented in Table 1 show no significant association between placement in developmental reading, writing, or mathematics and completion and noncompletion in online courses as revealed through the chi-square test.

Grade Point Average. Completers of online courses ($M = 2.47, SD = 1.52$) had a higher GPA than the noncompleters ($M = 1.66, SD = 1.56$), $t(303) = 4.45, p = .000$. As indexed by a Pearson correlation, the strength of the relationship

Table 1. Significance of Association Between Placement in Developmental Education Courses and Completion/Noncompletion in Online Courses

Course Placement	<i>d.f.</i>	<i>N</i>	χ^2	<i>p</i>
Reading placement	1	305	.05	.83
Writing placement	1	305	2.84	.09
Math placement	1	305	1.29	.26

was .24. Using Davis's (1971) descriptors, this is considered a low positive correlation. Consequently, even though a significant difference between the two groups was present, the difference is small.

Self-Directed Learning Readiness

Student scores derived from the BISL were used to determine self-directed learning readiness. No significant difference was found between completers ($M = 300.11$, $SD = 30.68$) and noncompleters ($M = 302.64$, $SD = 41.88$), $t(303) = -.58$, $p = .56$ in their self-directed learning scores.

Reasons for Noncompletion of Courses

Sixty-five (56%) of the online student noncompleters were asked why they chose not to complete their online course. Although each student answered the question in his or her own words, the general emphasis of the answers fell into five schematic themes: personal/time, course design/communication, technology/WebCT tutorial, institutional issues, and learning preference.

Personal/Time. Personal/time constraints was the coding used for twenty-two (34%) of the responses. A student's response was categorized as personal/time constraints if it related to personal circumstances or issues dealing with scheduling conflicts with time. Within this thematic group, the following reasons were included: personal problems, scheduling conflicts or overload, lack of motivation, work conflicts, and lack of time.

Course Design and Communication. Course design and communication was the coding used for eighteen (28%) of the responses. Included within this schematic theme were issues related to the level of responsiveness of instructors and the quality of course design and delivery.

Technology/WebCT Tutorial. Technology/WebCT tutorial was the coding used for twelve (18%) of the responses. Included within this schematic theme were issues related to computer, Internet, and the WebCT tutorial. The WebCT tutorial included technology because the tutorial required students to check their computer capacity and perform certain technical skills prior to enrolling in their regular class. For example, the students had to demonstrate the ability to attach documents, post messages, and upload and download materials.

Institutional Issues. Institutional issues was the coding used for seven (11%) of the responses. Institutional issues included advisement, enrollment, class cancellation, and drop procedures.

Learning Preference. Learning preference was the coding used for six (9%) of the responses. Responses obtained from students suggested that the format did not relate to their learning preferences.

DISCUSSION OF FINDINGS

Demographic Characteristics

The researchers investigated the demographic variables of age, gender, ethnicity, and financial aid eligibility between the two student groups of completers and noncompleters. No significant differences were found within the characteristics of age, ethnicity, or financial aid eligibility. This study supports research conducted by Giles (1999) and Willging and Johnson (2004) that indicated age and ethnicity were not significant to dropout or persistence in the online classroom.

The finding that females completed online courses at a higher rate than males suggests the possibility that the convenience of scheduling coursework and also of its location is more important to them than to males due to family and other personal responsibilities. Conklin (1997) conducted a five-year study compiling reasons that community college students drop courses. Her findings indicated that work schedule conflicts, bad time/inconvenient, and personal problems were the top reasons for noncompletion. An additional study (Grimes and Antworth 1996) reported the reasons for community college student withdrawals were health-related problems (family or personal), move or transfer, conflict with job, and family responsibilities. The top two reasons stated specifically by females for withdrawing included health-related problems (family and personal) and family responsibilities. Males stated that withdrawals were related more to nonrigorous coursework.

Enrollment Characteristics

The study found a significant difference between the number of hours in which completers and noncompleters enrolled. Completers enrolled in more hours than noncompleters. A significant difference between completers and noncompleters was also found in the number of online hours enrolled. The mean online hours of completers was 4.32 and 1.48 for noncompleters.

Academic Readiness Characteristics

Academic readiness, as measured by placement scores in developmental reading, writing, and mathematics, was not significantly associated with completion of

online courses. The results of this study do not indicate that level of academic readiness as measured at entry into the community college influences completion or noncompletion in online learning courses.

The study found previous GPA, as measured at entry at the beginning of the semester of data collection, to be significantly different for completers and noncompleters in online courses. The students completing their online courses had a mean GPA of 2.47 and students not completing their courses had a GPA of 1.66. This study is consistent with the research conducted by Tidewater Community College (2001), which found that when a student's GPA was under 2.00, he/she was less likely to complete an online course. When a student's GPA was between 2.0 and 3.0, there was almost an equal chance of being successful or unsuccessful in online learning. The significant difference in GPA found in the current study was not surprising, considering the Tidewater study. College-wide statistics at the research site indicate that students with GPAs lower than 2.00 complete fewer classes than students with a higher GPA. Students with higher GPAs might be expected to complete more courses because they were likely more academically prepared at the onset of the study.

Self-Directed Learning Characteristics

No significant difference was found in self-directed learning readiness scores between completers and noncompleters in online courses. Although no studies were found using the BISL, other studies have been conducted looking at self-directed learning and completion in online learning environments. Studies by Doherty (2000) and Pachnowski and Jurczyk (2000) utilized Guglielmino's SDLRS (Self-Directed Learning Readiness Scale) instrument and both indicated that self-directedness was not a strong indicator of academic success in an online course. Although not a study of self-directed learning, Varvel (2001) found that successful online students tended to be self-disciplined and motivated with strong time-management skills.

Self-Reported Reasons

A total of sixty-five students were contacted to obtain the self-reported reasons for not completing courses. Personal reasons accounted for only 34% of the reasons online students were not completing their coursework. Course design and communication accounted for 28% of the reasons; technology and WebCT tutorial issues accounted for 18% of the reasons; and institutional mistakes or procedures accounted for 11% of the reasons. The remainder of the students (9%) indicated they dropped their courses because online coursework did not fit their learning preference. Many of the self-reported findings

confirm those previously found by Frankola (2001), Hislop (2000), Moore et al. (2003), and Willging and Johnson (2004).

IMPLICATIONS AND RECOMMENDATIONS FOR POLICY AND PRACTICE

Although this study was conducted at one institution, the implications for practice and policy may be helpful to other community colleges that are trying to find strategies to improve retention rates in their online programs.

Student Service Personnel

Advisement. The results of this study provide advisors with pertinent information that should help them properly advise aspiring online students. The findings of this study, along with the research conducted at Tidewater Community College, indicate that students with lower GPAs are at greater risk of dropping their online courses and should be advised of the demands of a course delivered in this format.

In the student interviews, time constraints and lack of motivation were indicators for noncompletion. Advisors should talk with their students about how they plan to allocate time for their online classes. If students were to consider their schedules and allocate the hours necessary for online classes prior to enrollment, they might make better-informed decisions.

Student Support Services. The rapid growth of online courses has impacted the traditional ways of providing student support services. The findings of this study indicate that 18% of the contacted students were not completing their online courses because of technical or WebCT tutorial problems. Community colleges have traditionally provided tutorial services when deficiencies were identified in student academic areas. The online environment has created a need for proficiency in technology prior to enrolling in an online course. A recommendation for community colleges is to implement a student help desk to assist students with technology and WebCT tutorial problems. The help desk could provide information on computer hardware/software and Internet requirements for accessing online courses prior to enrollment. In addition, the help desk staff could assist students who struggle to perform the required tasks within the WebCT tutorial. If the help desk personnel determined a student lacked the computer competencies required to be successful in an online course, the student could be advised to enroll in an introductory computer class prior to enrolling in an online course.

Course Designers

Twenty-eight percent of the students contacted indicated they did not complete their online courses due to course design or lack of communication. An additional 9% of the students indicated that online learning did not fit their learning style preference. Comments were received from students that they could not get a response from their instructor, the materials were not available, and the course was confusing. Aragon, Johnson, and Shaik (2002) found that learners could be just as successful in the online environment as in a face-to-face environment, regardless of their learning style preference. This research suggests a responsibility on the part of course designers and developers to plan and design quality materials. Two significant recommendations related to this can be made after reviewing the findings of this study.

First, instructional designers need to look for innovative ways to facilitate quality teaching and learning recognizing that simply converting a face-to-face course to an online course does not accomplish this task. Although the content and course requirements should be the same, instructors need to realize that the methods of instructional deliver may need to be modified for the online environment. The researcher supports the recommendations of Johnson and Aragon (2003) that instructional designers should examine their traditional perspectives and adopt a philosophy of teaching and learning that is appropriate for online learning. Johnson and Aragon contend that powerful online learning environments need to contain a combination of the following elements: (1) address individual differences, (2) motivate the student, (3) avoid information overload, (4) create a real-life context, (5) encourage social interaction, (6) provide hands-on activities, and (7) encourage student reflection. Roueche and Roueche (2002) suggest that designers and instructors of online courses should examine the pathways students are required to travel—from orientation through instruction to course completion—with special regard for students' diverse skill levels and academic histories. As Banks (Virtual 2002) states, "A well-designed course is a prerequisite for a positive online learning experience for both faculty and students" (6).

Second, instructors need to establish a mechanism for communicating with their students. In the online environment, instructors need to set the parameters of when communication is to occur and then abide by those times. All courses should have a communication system embedded within the class, whether it is e-mail, Web boards, or chat rooms. In addition, online instructors should establish online office hours so students know when they can contact their instructor.

Policy

Based on the findings of this study, the researchers recommend distance education policies that provide for the use of technology to deliver and/or

enhance instruction and student services. The following components should be addressed: quality control measures and course development.

Quality Control Measures. The researchers recommend community colleges establish an ongoing quality control peer committee as well as a review process required for all online course development. The committee's main responsibility would be to ensure that each course is thoroughly developed in order for students to participate as required. As an additional quality control measure, community colleges should use the same platform for course design to promote consistency across online courses.

Course Development. Instructional design and program support should be available for all full-time and part-time faculty to assist in the development of online courses. Faculty should be required to attend an online course design workshop prior to developing their first online course. Each course should include the basic components required for an online course that are established by the quality control peer review committee. Additionally, existing courses should be reviewed and revised to meet the standards. Faculty members should be encouraged to participate in staff development activities to improve their current instructional practices in the online environment.

RECOMMENDATIONS FOR FUTURE STUDY

This study investigated the differences between demographic, enrollment, academic, and self-directed learning characteristics of completers and non-completers in online courses at one community college. The study also obtained students' self-reported reasons for not completing their coursework. This study should be replicated using a longitudinal study looking at factors influencing the persistence and retention of community college students in online courses. A longitudinal study is recommended because this study was based on a one-semester snapshot of students.

Researchers should replicate this study with multiple community colleges. Valuable information could be obtained by determining if the outcomes would be similar across community colleges. Such a study would provide the data to potentially reallocate staff development monies.

The qualitative component of this study needs to be expanded. Students were surveyed to determine why they did not complete their courses, but additional probing would provide a clearer understanding of the reasons, intentions, and motivations behind online student enrollment and persistence.

This study found that more females than males enrolled and completed at least one online course. Conducting a study to determine the reasons women enroll more than men would be interesting and could provide marketing tools for community colleges.

A study should be conducted to get a better understanding of how online courses are increasing access to individuals who have traditionally struggled with access to and retention in institutions of higher education. This suggestion emerges from the discussion that in this particular research site, online courses were appearing to eliminate such barriers.

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