



TCC INSTITUTIONAL RESEARCH BRIEF

Online Learning at Tidewater Community College

Online learning at Tidewater Community College (TCC) has grown from 45 online courses¹ during the 1998-99 academic year to 246 online courses during the 2001-02 academic year. This represents a 447% increase over the three-year period. Similarly, the number of unduplicated students served by online courses over the three-year period has increased 264%, from 850 to 3,097 students. In summer 1998, online courses were offered in four disciplines—namely, English, humanities, information systems technology, and natural science. By spring 2002, online courses were offered in 22 disciplines: accounting, administration of justice, administrative support technology, biology, business, dietetics, economics, education, engineering, English, geography, history, humanities, industrial engineering technology, information systems technology, math, music, natural science, political science, psychology, sociology, and student development.

With the increasing popularity of online learning, it is especially important to assess the effectiveness of these courses. This brief summarizes data that address the extent to which students are successful in these courses, the rate at which students who enroll in online courses reenroll at TCC, and how well the online courses prepare students for success in future courses. A summary of results from a spring 2002 survey of online students also will be presented.

Students who enrolled in online courses during the fall 2001 and spring 2002 semesters were more likely to be Caucasian (66%) and female (67%) compared to the overall student body (58% Caucasian and 58% female). Students who enrolled in online courses were, on average, the same age as all students enrolled at TCC (29 years old). Students enrolled in a least one online course during spring 2002 tended to have a slightly higher

average cumulative GPA (2.822) after completion of the semester, compared to all students who were enrolled during spring 2002 (2.748).

The overall success rate (grades of A, B, or C) for students who enrolled in college credit online courses

was 62% over four years from 1998-99 to 2001-02; in comparison, the overall traditional course success rate for the same courses that were offered online was 71%. The success rates for developmental courses were somewhat lower for both online and traditional courses. The online success rate for developmental English and math courses was 49% compared to a traditional developmental course success rate of 57%. Withdrawal rates were nearly twice as high for both college credit (18%) and developmental (21%) online courses compared to traditional courses (10% for both types of courses). There are a number of theories for this phenomenon including inaccurate expectations about both the nature of the online learning environment and the rigor of an online course, and the need to be somewhat of an independent learner in an online course. Lower success rates in online courses are due in part to the larger percentages of withdrawals from online courses. In fact, when students who withdrew from courses were excluded from the analysis, success rates for developmental online and developmental traditional courses were nearly identical (62% and 63%, respectively). Additionally, success rates in college credit online and traditional courses were more equivalent (75% and 78%, respectively).

Course Sequence (Fall to Spring)	% Successful in 2 nd Course <i>Online Prerequisite *</i>	% Successful in 2 nd Course <i>Traditional Prerequisite</i>
English 111/112	78% (n=39)	77% (n=3222)
History 101/102	94% (n=20)	71% (n=264)
Psychology 201/202	87% (n=24)	77% (n=566)

* Results should be interpreted with caution due to the relatively small sample sizes.

Table 1. Success in 2nd Course Based on Success in Online vs. Traditional Prerequisite

An examination of performance in course sequences, where a prerequisite course must be completed prior to enrolling in the second course, provides another measure of the effectiveness of online courses. Table 1 shows that students who successfully completed online prerequisites in the fall were as likely or more likely to be successful in the second course of the sequence the following spring semester when compared to students who successfully completed the prerequisite in a traditional classroom. For example, 78% of the students who successfully completed English 111 as an online course were also successful in English 112. In comparison, 77% of the students who successfully completed English 111 in the traditional classroom were successful in English 112.

Students who enrolled in at least one online course during the fall semester were retained to the following spring semester at similar rates as all students enrolled at TCC. The combined fall to spring retention rate over three years (1999-00 to 2001-02) for online students was 63% compared to 64% for all TCC students. The fall to spring retention for *new* fall students who enrolled in at least one online course was 66%. This was somewhat higher than the overall TCC *new* student retention rate of 63%.

A survey of online students was administered via the Internet during the spring 2002 semester to gauge perceptions of online courses. When students were asked why they chose the online course section, 57% indicated it was due to scheduling, and 29% indicated that they preferred distance education. Ninety-two percent (92%) of respondents said that they would take another online course based on their experience.

Students felt that they were motivated to learn the course content, felt challenged by assignments, and enjoyed the course. Most reported that their use of written communication and use of critical thinking (89% and 91%, respectively) was excellent or good. Not surprisingly, two areas that received slightly lower percentages of excellent or good responses were the students' participation in interaction with other students and feeling a part of the class. Although students routinely mentioned the advantages of flexibility and convenience of online courses in comments on the survey, disadvantages also were mentioned and included less interaction with other students, missing the atmosphere of the classroom, and delayed or incomplete answers to questions or problems.

In summary, data covering four academic years suggests that students engaged in online learning at TCC exhibit similar success rates as those who enroll in traditional courses. Further, students who take prerequisite courses online are as prepared or better prepared for the second course in the sequence when compared to students who take the prerequisite as a traditional course. Additionally, there is no significant difference in retention rates over the course of a year for online versus traditional students. Consistent with other Virginia community college findings, the analyses do indicate a higher course withdrawal rate for online students. For example, TCC's online withdrawal rate is approximately 20% and is similar to the 25% rate reported by Piedmont Virginia Community College. A follow-up study of these students will be conducted in 2002-03 to determine if the higher course attrition rate is rooted in the course delivery mode or other potential factors, either externally or internally related to instruction and the college in general.

Evaluation of Online Course Delivery	% Responding Excellent or Good
Opportunity for Interaction with Faculty	85%
Participation in Interaction with Faculty	80%
Opportunity for Interaction with Students	80%
Participation in Interaction with Students	74%
Motivation to Learn Course Content	89%
Use of Written Communication	89%
Use of Critical Thinking	91%
Challenge of Assignments	93%
Feeling a Part of the Class	79%
Enjoyment of this Course	82%

Table 2. Online Survey Results

¹ Canceled courses and independent study courses are not included.