

A Comparison of Unsuccessful Student Outcomes for Distance Learning, Hybrid and Traditional
Course Formats

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Abstract

This study examined the rates of unsuccessful outcomes for Hilbert College students enrolled in three course formats, distance learning, hybrid and traditional for the period from Spring 2003 through Summer 2011. Unsuccessful outcomes were defined as grades of F, I, or W. Courses offered in two or more of these formats were compared. Overall, students enrolled in distance learning courses were twice as likely to receive an F, I or W than were students in the same traditional, on-campus courses. Hybrid courses, combining elements of both distance learning and traditional formats, are relatively new at Hilbert College only being offered since Spring 2010. Overall, outcomes for hybrid courses tended to fall in between the other two formats and were more similar to traditional course outcomes than to distance learning outcomes.

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At a December 5, 2011 Center for Learning session entitled, “Distance Learning – Planning Session,” several participants informally observed that students in distance learning courses were more likely to get ‘lost’ over a semester than was the case for traditional, on-campus courses. Although the reports were anecdotal, several faculty spoke of students who were irregular in logging in to access course materials, apparently not completing the readings, lectures and assignments until the last minute. Other examples were given of students who simply seemed to ‘disappear’ from the course at some point during the semester.

Since these reports pointed to possible significant problems that some students may have in taking courses in a distance learning format, a suggestion was made to look at data on grades as a measure of outcomes for courses taught in both distance learning and traditional formats. An additional suggestion was made to also include courses taught as hybrids. Hybrid courses are relatively new at Hilbert College, only having been offered since the spring 2010 semester. These are courses which combine both the traditional live classroom as well as the online environment.

A 2010 U.S. Department of Education report from the Office of Planning, Evaluation, and Policy Development was based on a meta-analysis of effect sizes from 99 empirical studies contrasting online and face-to-face instruction. The key findings of the report were that “students in online conditions performed modestly better, on average, than those learning the same material through traditional face-to-face instruction” (p. xiv), and that instruction combining

elements of both formats (hybrids) had a larger advantage relative to traditional instruction than did purely online instruction.

Methodology

The data for this study were obtained from a PowerCampus database with records of students' academic transcripts covering the period of Spring 2003 through the Summer of 2011. The current semester, Fall 2011, was not included as final grades were not yet reported. All students with reported final grades for any undergraduate, credit-bearing course were included. Students auditing a course were excluded as was any course that reported grades on a pass-fail.

During this period a total of 73,401 students were enrolled in traditional, face-to-face courses, 3,001 were enrolled in online or distance learning courses and 294 students were enrolled in some form of a hybrid course.

Outcomes of interest were final grades of F indicating academic failure, I or Incomplete indicating a student's inability to complete coursework due to extenuating circumstances, and W for Withdrawal. Withdrawals from a course may be granted after the drop/add date (end of second week of a semester) and by the ninth week. It recognized that students may receive Incompletes or apply for Withdrawal for a number of varying reasons not all having to do with academic difficulty. It was not possible in this study to separate out those various reasons. Incompletes and withdrawals were included as measures of negative course outcomes because along with the F grade these outcomes result in zero "quality points" toward a diploma after a student has enrolled and started a course. An incomplete may, of course, be converted to a regular grade if a student satisfactorily completes the coursework with a specified period of time. In those cases the regular grade is substituted. Incompletes represent a potential negative course

outcome of interest in that the I grade may be a result of extenuating circumstances related to the course format as well as other circumstances in the student's life.

Quality point averages (QPA) over the period of this study were also computed for each course to provide an additional measure of outcome. QPAs are based on a system which awards 4 points per credit hour for an A, 3 points for a B, 2 points for a C, 1 point for a D, and 0 points for an F. Incompletes and withdrawals also result in 0 points for that course.

To provide some comparison between formats, the primary data analyses of this report looked at just those courses which, during the period cited above, were offered in at least two of the formats, for example, a course which was conducted as both a traditional course and as an online course at least one time each. Furthermore, online courses were included in the analyses only if the total historical enrollment for the course since spring 2003 was at least ten students. This restriction was an effort to avoid outliers in the data on distance learning course outcomes. A total of 53 courses were conducted in both online and traditional formats. No attempt was made to equate instructors or semesters and years.

As mentioned before, hybrid courses are relatively new at Hilbert College. Since the Spring semester of 2010, 22 separate courses have been offered as hybrids at least once. Of these 22, only two courses have been also offered as both online and traditional courses.

It should be noted that this study did not look at outcomes other than those described above. Thus there was no attempt made to compare the number of A, B, C or D grades received across formats.

Results

For all 73,401 students enrolled in traditional courses between spring of 2003 and summer of 2011, 5.52% received an F grade, 0.63% had an Incomplete grade (I), and 5.36% withdrew (W) from the course. Combining these percentages provides a rough measure of absence of success or the percentage of students who received zero Quality Points for the course. Among all students in traditional courses this was 11.51%.

In general, students in distance learning or online courses during this same period were twice as likely to have a negative outcome in their courses compared to students in traditional courses. Almost one in ten online students (9.56%) received an F final grade, 1.6% received an I, and 10.7% withdrew from the course (see Figure 1.). The combined negative outcome rate for distance learners was 21.86%.

S'03 – A'11	Student Count	Percent F's	Percent I's	Percent W's	Percent Unsuccessful (F+Inc+W)
Distance Learning Courses	3001	9.56%	1.60%	10.70%	21.86%
Traditional Courses	73401	5.52%	0.63%	5.36%	11.51%

Figure 1. Outcomes for all distance learning versus traditional courses

When only those courses which were provided in both online and traditional formats were examined the results looked very similar as shown in Figure 2. These percentages exclude traditional courses that were not also offered at least once in an online format. They also omit online courses with fewer than 10 total enrollments over the 8 year period (n=9). Typically these small enrolled online courses were internships or independent studies. A total of 53 courses were

included, many offered multiple times both online and in traditional formats. The overall outcome results were very similar to those seen in the overall course results with distance learning courses having an approximately two to one greater unsuccessful rate.

S'03-A'11	Student Count	Percent F's	Percent I's	Percent W's	Unsuccessful Rate
Distance	2979	9.28%	1.48%	10.19%	20.95%
Traditional	12,264	5.32%	0.77%	5.77%	11.86%

Figure 2. Overall outcomes for courses matched on distance learning and traditional formats.

An examination of the courses matched for distance learning and traditional formats showed that for 44 of the 53 courses (83.02%) the Unsuccessful Rate was higher for the distance learning format than for the traditional face-to-face format. In 11 of 53 courses (79.25%) distance students had higher percentages of F final grades than did traditional students. In 83.02% of courses (44 of 53) distance students had higher rates of Incompletes and in 75.5% (40 of 53) distance students had higher rates of Withdrawals than did students in the same course taught in a traditional format.

Looking at average QPAs for the matched courses, distance learning students earned an overall average QPA of 7.62 compared to an average of 8.43 for students in matched traditional courses. In only 10 of the 53 courses was the QPA of distance learners larger than for their matched traditional counterparts and then by an average of 0.69 QPA points (note: one letter grade difference is equal to 3 QPA points). On the other hand in the 43 courses in which the QPA was higher for traditional students than for distance learners the average difference was

-1.17 QPA points. In 8 of those 43 courses the QPA difference was -2 points or greater and as much as -3.5 points (more than a letter grade) in one course.

Examination of the standard deviations for QPAs also revealed that the distribution of letter grades tended to have greater variability or spread in distance learning courses than was the case for the matched traditional, face-to-face courses.

Hybrid Courses

Between the spring semesters of 2010 to 2011, 22 courses have been offered in a hybrid format with a total of 294 students enrolled. Of these only two have also previously been offered as distance learning courses. Therefore direct comparisons of hybrid to online to traditional formatted courses was not considered possible although in time this should be an area of focus. Overall, in those 22 courses, 5.1% of students received an F grade and 6.1% withdrew. No students had received an Incomplete. The overall unsuccessful rate for hybrids, then, was 11.2% which is comparable to the overall rate for traditional courses and much lower than was seen for distance learning courses.

Conclusions

Undoubtedly many, if not most, students taking online courses at Hilbert are quite successful. The steady growth of enrollments in these offerings as well as the successful addition of hybrid courses continues to meet very real needs for many of our students. The fact that this study chose to focus on negative rather than positive outcomes is in no way meant as an indictment of online instruction. However, in order to continue to provide the highest quality

instruction possible, regardless of format, it is important to consider the potentially negative outcomes as well as the positives.

This study provides strong evidence that the risk of a negative outcome, defined as receiving an F, an Incomplete, or withdrawing from a course, is much higher for students who enroll in distance learning courses at Hilbert College when compared to students who take the same courses in a traditional, face-to-face format on-campus. These negative or unsuccessful outcomes can have a very real impact on extending or disrupting a student's college career, especially failing grades and withdrawals.

Given that a growing body of research is showing that students in online instruction perform at least as well and possibly modestly better than those learning the same material through traditional face-to-face instruction (U.S. Department of Education, 2010), it is important to look more closely at Hilbert College's online offerings to ask why this does not seem to be the case for our students. Unfortunately there is nothing in the data for this study which can directly address that question.

Several possibilities present themselves as factors which may contribute to greater negative outcomes for distance learning students. It is possible, for example, that Hilbert students who self-select to enroll in an online course over a traditional course are not well prepared for that format of instruction. While students are expected and encouraged to attend special orientation sessions for online and hybrid courses, it is not clear how many actually do or how such orientations prepare students beyond providing technical practice with the course management system. In recent semesters at least one faculty member has begun trying out a Readiness survey with prospective students in an online course. It would be useful to look at whether students' scores on such an instrument are related to outcomes. If such a survey proved

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to be even modestly predictive of success/failure a broader use across online and hybrid courses could be of tremendous value.

It is also possible that the history of a rather organic growth process for distance learning at Hilbert College has created greater variability in the ways that such courses are conducted than is true for traditional offerings. The very flexibility and individual initiative that has led to the development of online courses might also be a factor in more variable student outcomes. Consideration of these findings will hopefully evoke discussion among the faculty about developing and instituting standards for online and hybrid course offerings at Hilbert. In fact, the discussion group which initially prompted this study was considering this very same issue and recommending work toward a set of “best practices” in online instruction.

The preliminary data from hybrid courses suggest that this format may be more conducive to our students than strictly online offerings. However, as noted, there is as yet insufficient data to draw any firm conclusions from comparisons of this format with that of online or traditional courses. This is a question that should be revisited in another year or two.

References

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