

Advising Intervention Analysis

March 16, 2012

Office of Planning and Institutional Research



Executive Summary

An analysis was conducted to evaluate the effectiveness of new TCC students completing an Educational Planning Worksheet (EPW) with an advisor. Specifically, two studies were conducted to assess the effectiveness of completing the EPW: 1) a study of new TCC students (including transfers) who tested into at least one developmental education area prior to the Fall 2011 semester, and 2) a study of first-time students in the Achieving the Dream (AtD) cohort to compare those who completed an EPW and those who did not.

Study One

A total of 2,359 students who were new to TCC completed COMPASS placement tests at TCC and tested into at least one developmental education area during the period spanning from open enrollment in Spring 2011 to the last day to add a 16-week course in Fall 2011. Of these students, 269 (11.4%) completed an EPW on or prior to the last day to add a 16-week class in the Fall, and 2,090 (88.6%) did not. Of all 2,359 students, 2,304 (97.7%) of them enrolled in a TCC course and were still enrolled after the Fall Add/Drop period ended. Of interest in this study was whether students completing an EPW with an advisor enrolled at a higher rate than those without an EPW.

A confidence level of 95% was used for all statistical testing. The results of a chi-square test revealed that the percentage of EPW students who enrolled in at least one course in Fall 2011 was not significantly different from that of students who did not complete the EPW. Interestingly, although the difference was not very large, an independent-samples *t*-test showed that students with an EPW enrolled in significantly more credit hours than did those without an EPW. Table 1 below presents the descriptive statistics for each group, with significant differences highlighted in yellow.

Table 1. Fall 2011 Enrollment Rates and Credit Hours by Group.

Student Group	EPW Students	Non-EPW Students	Test Statistic	<i>p</i> -value
Total Number of Students	269	2,090		
Enrolled in Fall 2011 Courses	264 (98.1%)	2,040 (97.6%)	$\chi^2 = .30$	.59
Average Credit Hours (with Standard Deviation)*	10.94 (3.01)	10.45 (3.55)	$t = -2.29$	.02

*Statistically significant difference with a 95% confidence level.

Study Two

Two hundred sixty-three students (7.3%) out of the total of 3,622 students in the Fall 2011 AtD cohort completed an EPW on or prior to the last day to drop a 16-week course in the Fall semester. For comparison purposes, a random sample of 263 students in the Fall 2011 AtD cohort who did not complete an EPW was selected for the study. The goals of this study were to examine whether students who complete an EPW have higher rates of persisting from Fall-to-Spring, satisfactory academic progress (SAP), and earning a C or better in developmental education courses. Satisfactory academic progress was defined as having a 67% or higher rate of passing credit hours out of total hours attempted.

A confidence level of 95% was used for all statistical testing. Regarding persistence to Spring, the results of a chi-square test revealed no significant difference between students who completed an EPW and those who did not. Findings on SAP, however, indicated that students without an EPW had a significantly higher rate than did those with an EPW. Additionally, an independent-samples *t*-test showed that students who completed an EPW were enrolled in significantly more credit hours than were those who did not. Descriptive statistics for each group are presented in Table 2 below, with significant differences highlighted in yellow.

Table 2. Persistence, SAP Rates, and Credit Hours by Group.

Student Group	EPW Students	Non-EPW Students	Test Statistic	<i>p</i> -value
Total Number of Students	263	263		
Persistence to Spring 2012	191 (72.6%)	197 (74.9%)	$\chi^2 = .35$	.55
Rate of SAP*	191 (72.6%)	216 (82.1%)	$\chi^2 = 6.79$	.01
Average Credit Hours (with Standard Deviation)*	10.90 (2.86)	10.21 (3.88)	$t = -2.34$	.02

*Statistically significant difference with a 95% confidence level.

To explore whether there were unique effects of completing an EPW for students in developmental education courses, the same tests for persistence, SAP, and credit hours were conducted including only students who took at least one developmental course in Fall 2011. The only difference from the findings above was that the difference between the rates of SAP among the EPW (45.7%) and non-EPW (37.3%) groups was not statistically significant among developmental students, $\chi^2 (1, N = 167) = 1.03, p = .31$.

In addition to investigating persistence and SAP, students' grades in the seven developmental education courses during Fall 2011 were examined as a function of whether or not they completed an EPW (again, on or prior to the last day to drop a 16-week course). In particular, the two groups of students were compared on their rates of earning a C or better in each course. A confidence level of 95% was used for all tests. For all seven courses, chi-square tests indicated that there were no significant differences between the groups. However, it is important to note that the sample sizes were quite small for several of the courses, limiting the ability to detect statistically significant differences. Results of the chi-square tests are presented with the descriptive statistics for each course in Table 3 below.

Table 3. Rates of Success (C or Better) in Developmental Education Courses by Group.

Student Group	EPW Students	Non-EPW Students	Test Statistic	p-value
Total Number of Students	263	263		
MATH 0003 (Basic Math)	46 of 114 (40.4%)	23 of 48 (47.9%)	$\chi^2 = .79$	.37
MATH 0013 (Beginning Algebra)	24 of 41 (58.5%)	19 of 32 (59.4%)	$\chi^2 = .01$	.94
MATH 0123 (Intermediate Algebra)	6 of 13 (46.2%)	14 of 23 (60.9%)	$\chi^2 = .73$	.39
ENGL 0903 (Reading I)	21 of 37 (56.8%)	6 of 9 (66.7%)	$\chi^2 = .29$	.59
ENGL 0913 (Reading II)	72 of 97 (74.2%)	20 of 32 (62.5%)	$\chi^2 = 1.62$	.20
ENGL 0923 (Writing I)	27 of 74 (36.5%)	13 of 24 (54.2%)	$\chi^2 = 2.35$	.13
ENGL 0933 (Writing II)	45 of 81 (55.6%)	18 of 33 (54.5%)	$\chi^2 = .01$	.92

Conclusions

In summary, findings from study one revealed that new TCC students (including transfers) testing into at least one developmental education area who completed an EPW enrolled in significantly more credit hours during the Fall 2011 semester than did their peers who did not complete an EPW. However, there was no difference in the rates of actual enrollment based on whether or not the students completed an EPW.

Similarly, study two showed that first-time entering students who completed an EPW enrolled in significantly more credit hours in the Fall semester than did those without an EPW. As with the test including all students testing into developmental education, the difference in mean credit hours was small (i.e., mean difference was less than 1 credit hour for both comparisons), but it was statistically significant.

Findings from study two also revealed that students who did not complete an EPW had a significantly higher rate of satisfactory academic progress (SAP) than those who completed an EPW. It is unclear why this difference exists. Nevertheless, when considering the results for credit hours, one possible explanation for this finding is that many students completing the EPW may have enrolled in more courses than they could successfully complete. Although additional research is clearly needed to unearth the reasons for these effects, it may be possible that completing the EPW raised students' awareness of the length of time it would take in order to graduate. Perhaps with the goal of graduating sooner, EPW students may have enrolled in more courses than they would have without going over the worksheet.

The results from study two pertaining to persistence and grades in developmental courses failed to reveal any significant differences between the groups. Moreover, findings were similar when comparing the persistence, SAP rates, and credit hours of only developmental education students. The one exception to this was that the SAP advantage for the non-EPW group disappeared when examining only students enrolled in developmental coursework. In fact, although the difference was not statistically significant, the SAP rate for developmental students who completed an EPW was slightly higher than the rate for those who did not.