

The Effectiveness of Developmental Academic Advising as a Retention Intervention for First-Generation Community College Students

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Cohen et al. (2014) explained that unlike four-year universities, where the students' lives frequently revolve around meeting academic goals and maintaining a social life, attendees of community colleges often struggle to meet educational requirements due to their work and familial commitments. These additional responsibilities make educational progress difficult and are often cited as the primary reasons for which community college students have a reduced likelihood of persistence until degree completion compared to their four-year counterparts (Cohen et al., 2014). One student group at particularly high risk of dropout is first-generation college students (Holmes & Slate, 2017). The United States Department of Education defines a first-generation student as one whose parents did not complete a baccalaureate degree and for the purpose of this study first-generation college student is classified in this way (Cataldi et al., 2018).

Researchers note that first-generation college students are of particular concern because they make up over 56% of the undergraduate population (Center for First Generation Student Success, 2018); research has also revealed that this student group is two times more inclined to exit college after the first year of enrollment compared to students with a parent who has a bachelor's degree (Swecker et al., 2013). First-generation students are considered at an increased risk of dropping out for many reasons. They may lack familial support, are likely to have many outside obligations, may lack a strong academic foundation, and can lack the foundational knowledge of college expectations (Swecker et al., 2013).

Additionally, first-generation college students are likely to fall into other categories which place them at an increased risk; for example, many in this student group are ethnic minorities, female, and have low socio-economic position (Dennis et al., 2005; Ecklund, 2013; Hicks, 2002; Holmes & Slate, 2017; Lohfink & Paulsen, 2005). First-generation student status in conjunction with one or more of these factors places these students in an extremely high-risk category. Thus,

it is important to understand the circumstances which effect their persistence in postsecondary education.

Academic Advising as a Retention Tool

Research has found that overall student retention can be improved by integrating students into college by making students more aware of campus resources, such as tutoring and counseling services, and encouraging students to utilize such services. (Cohen et al., 2014; Longwell-Grice et al., 2016). One campus resource which has been noted as having an efficacious influence on student retention is academic advising (Swecker et al., 2013). Academic advising comes in many forms and can address a variety of student needs. Two contrasting models of academic advising are prescriptive advising and developmental advising. Crookston (1994) posits that prescriptive academic advising is the traditional, authoritative relationship usually seen between student and advisor. Prescriptive advising is more widely used in the community college setting. Winston and Sandor (1984) define developmental advising as the relationship which results when “the advisor and the student differentially engage in a series of developmental tasks, the successful completion of which results in varying degrees of learning by both parties” (pp. 5-6). The impact of all types of academic advising on retention has been well documented, but very little data exists on the impact of advising for first-generation community college students (Alvarado & Olson, 2020, Anderson et al., 2004; Drake, 2011; Fricker, 2015; Habley & McClanahan, 2004; Heisserer & Parette, 2002).

Purpose of the Study

The purpose of this study was to investigate the impact developmental academic advising had on first-generation community college students’ retention and graduation rates. Anderson, Motto, and Bourdeaux (2004) noted the value of academic advising and its role in predicting the

success and satisfaction of college students; however, there is a significant gap in the existing research with respect to differences in student outcomes based on advising style. Additionally, the impact of developmental academic advising on first-generation students is not well understood. Researchers noted the multiple academic and social struggles typically faced by first-generation students (Alvarado & Olson, 2020) and posit activities which require structured interactions with faculty could promote more successful outcomes (Katreovich & Aruguete, 2017).

Methodology

The study was conducted in one of 15 community colleges in the southeast region of the United States; the community college of choice is in a rural, northern district within the state. The study used an ex post facto approach to investigate the extent to which academic advising type may have impacted first-generation community college student semester-to-semester retention and graduation rates. The study had one independent variable, academic advising type, which is prescriptive or developmental. Also, there were two dependent variables, which were graduation rates and retention rates.

The study analyzed data for two incoming, first year, first-generation community college student cohorts; cohort one, the control group, was comprised of students who received a prescriptive style of academic advising, and cohort two, the experimental group, was comprised of students who received a developmental style of academic advising one year later. The study analyzed how many first-generation students from the control group sample, which received a prescriptive form of academic advising, persisted until graduation, versus how many first-generation students from the experimental group, which received developmental academic advising, graduated. Additionally, the study analyzed the semester-to-semester retention rates of the prescriptive advising group and compared them to the semester-to-semester retention rates of

the students in the developmental advising group. The study used historical data from three years prior to the time of the study.

Population and Sample

Cohort One Demographics

Information was collected using the research site's comprehensive Student Information System, to determine the total number of all first-time freshmen who were admitted to the college in the same semester as cohort one, as well as the demographic information for these students. First generation status was self-reported by students on their application for enrollment. A total of 644 students entered as first-time freshman during the first term, and of those students, 75 were first generation, which was 11.65 % of the sample. Table 4 shows the demographic information for all first-time freshman entering during the term, as well as the demographic information for the control group (Cohort One) of first-generation students who entered as freshman during the semester of observation. Both student cohorts were required to meet with their academic advisor one time per semester.

Table 1. First-Time Freshman and Cohort One Student Demographics

Demographic Variable	<u>First-Time Freshman General Populous</u>		<u>First Generation Student- Cohort One</u>	
	N	Percentage	N	Percentage
Gender				
Male	298	46.27	22	29.33
Female	346	53.73	53	70.67
Total	644	100	75	100
Age				
Under 20	1	0.16	0	0
20-25	612	95.03	72	96
26-35	23	3.57	3	4
36-50	5	0.78	0	0
51 and Up	3	0.47	0	0
Total	644	100	75	100
Ethnicity				
Caucasian	142	22.05	15	20
African American	467	72.5	60	80
Native American	3	0.47	0	0
Hispanic	12	1.86	0	0
Asian or Pacific Islander	7	1.09	0	0
Other	13	2.02	0	0
Total	644	100	75	100
Student Enrollment Status				
Full-Time	622	96.58	74	98.67
Part-Time	22	3.42	1	1.33
Total	644	100	75	100

Cohort Two Demographics

Information was collected using the research site’s comprehensive Student Information System, to determine the total number of first-time freshmen who entered the college during the next Fall, the same semester as Cohort 2, as well as the demographic information for these students. First generation status was self-reported by students on their application for enrollment. A total of 596 students entered as first-time freshman during Cohort 2’s term of entry, and of those students, 78 were first generation, which was 13.09 % of the sample. Table 5 shows the demographic information for all first-time freshman entering in during the term, as well as the demographic

information for the experimental group (Cohort Two) of first-generation students who entered as freshman during the semester.

Table 2. First-Time Freshman and Cohort Two Student Demographics

Demographic Variable	First-Time Freshman General Populous		First Generation Student- Cohort Two	
	N	Percentage	N	Percentage
Gender				
Male	278	46.64	29	37.18
Female	318	53.36	49	62.82
Total	596	100	78	100
Age				
Under 20	138	23.15	17	21.79
20-25	433	72.65	61	78.21
26-35	14	2.35	0	0
36-50	8	1.34	0	0
51 and Up	3	0.50	0	0
Total	596	100	78	100
Ethnicity				
Caucasian	136	22.81	10	12.82
African American	423	70.97	66	84.62
Native American	1	0.17	0	0
Hispanic	13	2.18	1	1.28
Asian or Pacific Islander	3	0.50	0	0
Other	20	3.36	1	1.28
Total	596	100	78	100
Student Enrollment Status				
Full-Time	573	96.14	76	97.44
Part-Time	23	3.86	2	2.56
Total	596	100	78	100

Data Analysis Procedures and Results

Research Question One Analysis

A t-test for independent samples was used to test student persistence from semester to semester within each student group.

Research Question 1. Were the cohort of first-generation community college students who received a developmental style of academic advising retained at rates that were significantly

different from those first-generation community college students who received a prescriptive style of academic advising?

T-test for Independent Samples. Students in each cohort were assigned a retention score of 0-4. Retention scores were based on the number of semesters students remained enrolled. Students who enrolled in but withdrew or failed all courses in the first semester of attendance and did not enroll the next semester were assigned a retention score of 0. No student was assigned a retention score of more than four, even if additional semesters were completed. Additionally, summer enrollment was not factored into students' retention scores.

An independent samples t-test was conducted to determine the effect that academic advising type may have had on student semester-to-semester retention. Retention scores were compared between Cohort One ($N = 75$), which received prescriptive advising, and Cohort Two ($N = 78$), which received developmental advising and were computed at the .05 level. There was not a significant difference in the scores for Cohort One ($M = 2.67, SD = 1.50$) and Cohort Two ($M = 2.47, SD = 1.48$), $t(150.51) = 0.799, p > 0.05$. Academic advising style was found to have no statistically significant effect on student retention.

Research Question Two Analysis

A chi-square was used to test the relationship between graduation percentages among the two groups.

Research Question 2

Did the cohort of first-generation community college students who received a developmental style of academic advising graduate at rates that were significantly different from those first-generation community college students who received a prescriptive style of academic advising?

Test of Independence Chi-square. The test of independence chi-square was used to test whether the number of graduating students in Cohort One ($N = 75$) who received prescriptive academic advising was significantly different than the number of graduating students in Cohort Two ($N = 78$) who received developmental academic advising. The time frame for graduation used for both cohorts was two full academic years from the semester of admission. There was no statistically significant association between the rate of graduation in students in Cohort One who received prescriptive academic advising and those who received developmental academic advising, $X^2(1, N = 153) = 1.06, p > .05$. Academic advising style was found to have no statistically significant effect on student graduation rates.

Discussion of Findings

The overall results of this study indicate that neither prescriptive advising or developmental advising made a difference in student retention or graduation rates. Student retention in this study was alarmingly low, both for the group of first-generation students receiving prescriptive developmental advising, and for the group receiving developmental academic advising. The following chart provides a breakdown of drop-out points for students in each advising cohort, as well as graduation rates for both cohorts.

Table 3

Retention Scores and Graduation Rates for Prescriptive Advising and Developmental Advising Cohorts

Retention Scores	<u>Cohort One (Prescriptive Advising)</u>		<u>Cohort Two (Developmental Advising)</u>	
	N	Percentage	N	Percentage
0	9	12	8	10.26
1	11	14.67	18	23.08
2	13	17.33	13	16.67
3	5	6.67	7	8.97
4	37	49.33	32	41.03
Total	75	100	78	100
Graduated	9	12	14	17.95
Did Not Graduate	66	88	64	82.05
Total	75	100	78	100

In both cohorts, nearly half of all first-generation students dropped out in the first two semesters of attendance. In comparison, the total retention for all students enrolled at the institution at the same time as Cohort 1 was 60.49 %. The total retention for all students enrolled at the institution at the same time as Cohort 2 was 59.9 %. It is also important to note that for both cohorts a very small percentage of students were lost in the third semester of attendance, as most students who made it past the second semester were still enrolled at the end of the fourth semester. Existing academic advising research seemed to point to the likelihood of statistical significance upon the analysis of the research questions, however, first-generation retention and graduation rates were not impacted by academic advising style, even when using the developmental approach.

Poor retention in first-generation community college students has been well documented (Hertel, 2002; Hicks, 2002; Ishitani, 2006), and the results of the study further confirm that phenomenon. The study found that the general populous of first-time freshman students entering the college during the same semester of entry as Cohort 1 were 53.73 % female and 72.5 % ethnic minority, while the first-generation cohort was 70.67 % female and 80 % ethnic minority (see Table 4).

Table 4
 2015 First-Time Freshman and Cohort One Student Demographics

Demographic Variable	First-Time Freshman General Populous		First Generation Student- Cohort One	
	N	Percentage	N	Percentage
Gender				
Male	298	46.27	22	29.33
Female	346	53.73	53	70.67
Total	644	100	75	100
Age				
Under 20	1	0.16	0	0
20-25	612	95.03	72	96
26-35	23	3.57	3	4
36-50	5	0.78	0	0
51 and Up	3	0.47	0	0
Total	644	100	75	100
Ethnicity				
Caucasian	142	22.05	15	20
African American	467	72.5	60	80
Native American	3	0.47	0	0
Hispanic	12	1.86	0	0
Asian or Pacific	7	1.09	0	0
Islander				
Other	13	2.02	0	0
Total	644	100	75	100
Student Enrollment Status				
Full-Time	622	96.58	74	98.67
Part-Time	22	3.42	1	1.33
Total	644	100	75	100

Likewise, the general populous of first-time freshman students entering the college during the same semester of entry as Cohort 2 were 53.36 % female and 70.97 % ethnic minority, while the first-generation cohort was 62.82 % female and 84.62 % ethnic minority (see Table 5).

Table 5
2017 First-Time Freshman and Cohort Two Student Demographics

Demographic Variable	First-Time Freshman		First Generation	
	General Populous	Student- Cohort Two	N	Percentage
Gender				
Male	278	46.64	29	37.18
Female	318	53.36	49	62.82
Total	596	100	78	100
Age				
Under 20	138	23.15	17	21.79
20-25	433	72.65	61	78.21
26-35	14	2.35	0	0
36-50	8	1.34	0	0
51 and Up	3	0.50	0	0
Total	596	100	78	100
Ethnicity				
Caucasian	136	22.81	10	12.82
African American	423	70.97	66	84.62
Native American	1	0.17	0	0
Hispanic	13	2.18	1	1.28
Asian or Pacific	3	0.50	0	0
Islander				
Other	20	3.36	1	1.28
Total	596	100	78	100
Student Enrollment Status				
Full-Time	573	96.14	76	97.44
Part-Time	23	3.86	2	2.56
Total	596	100	78	100

First generation college students have historically been “disproportionally overrepresented in the most disadvantaged racial, income, and gender groups, and thereby inhabit intersecting sites of oppression” (Lohfink & Paulsen, 2005, p. 409). In addition, the often low socioeconomic status of these students can necessitate their need to work an increased number of hours per week on average than their non-first-generation peers, and it is more probable that they considered finances in their academic decisions (Ecklund, 2013).

The results of this study seem to confirm the retention and graduation obstacles faced by first-generation students and indicate the need for an even higher level of support within academic

advising frameworks to truly impact their outcomes. The results also seem to point to the need to have support happen very early in enrollment and more often. In this study, both the student group who received prescriptive advising and the student group who received developmental academic advising had one required meeting with advisors, and most of these meetings happened late in the first semester of attendance. Since the drop-out points for both cohorts were very early, having advisor meetings much earlier could potentially yield better outcomes. Additionally, students were only required to meet with their advisors once per semester during priority registration.

Recommendations for Future Practice

The results of this research are concerning. Only 12% (Cohort One) and 17.95% (Cohort Two) of first-generation students within this study had graduated and only 49.33% (Cohort One) and 41.03% (Cohort Two) were still being retained at the two-year mark. This is despite the developmental advising model being used with the students in Cohort Two. Advisors, teachers, and administrators should explore ways to strengthen and support first-generation students' retention from semester-to-semester and to encourage degree completion within developmental academic advising models. One way to accomplish this may be to build in meetings with high-risk students early in the semester after initial admission.

Swecker's (2011) study on first-generation students and advising contact found that although there was no significant difference in first-generation retention on the variables of gender, race, and major, there was significance on the variable of number of advisor meetings. Therefore, increasing the number of meetings advisors have students could be one way to strengthen developmental advising programs, especially within settings where the student population is largely at-risk of drop-out.

Another suggestion for improving academic advising practice would be to encourage schools to develop more effective methods of student advising and retention interventions. Advisors should be made aware of which students are first-generation and should be trained on effective practices to improve their outcomes. A question about first-generation status could be asked on pre-advising questionnaires, giving advisors the opportunity to discuss specific obstacles with students and follow-up frequently on student progress throughout the semester. Advisors should also verify that students understand what it means to be first-generation to provide support to students self-reporting of such information.

A final suggestion could be for colleges to incorporate intrusive advising into their developmental advising frameworks. Intrusive advising is a type of intervention tool which can identify student's struggles with academics and then motivates students to seek help early. In intrusive advising, interventions happen at the first sign of academic difficulty (Earl, 1988). Earl (1988) stated that intrusive advising uses the systematic approach seen in prescriptive advising models and the knowledge of development found in developmental models of advising but solves one of the major issues with developmental advising, which is the student's unwillingness to self-refer. Intrusive advising could be valuable for colleges to help with the retention of high-risk populations because it encourages systems which identify student difficulty and then uses outreach to encourage students to meet with advisors. Advisors can then point students in the direction of academic help or other campus help services.

Limitations

The limitations of this study resulted from a few factors. First, the study analyzed the relationship between advising style and semester-to- semester retention, however, there are many other uncontrolled factors which could have affected student retention in the student sample. These

included, but are not limited to, the financial burden of school, outside obligations and responsibilities, and an inability to pass or complete coursework. Additionally, the study analyzed the relationship between advising style and student graduation. Like retention, there were potentially many factors which could have affected student graduation rates, including transfer to another institution before completion of sixty-two hours of required coursework, inability to remain enrolled because of financial strain, and other outside obligations which could have hindered completion. Additionally, students self-reported their first-generation status which could have resulted in students marking themselves incorrectly or failing to mark themselves correctly. Lastly, students were required to make only one advising appointment during registration, however, some students may have chosen to make more than one appointment causing a variation in the number of advising sessions within cohorts.

Conclusion

The results of the study indicate that targeted efforts which identify the obstacles faced by first-generation community college students and the development of supportive measures to addresses student struggles are needed to improve the retention and graduation rates in the first-generation community college student population. Additionally, the results highlight the need for a greater understanding about what strategies within academic advising frameworks have a positive influence on at-risk student outcomes.

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