

Freshman Seminar: A Broad Spectrum of Effectiveness

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Abstract. In the opinions expressed by many faculty members as well as students, freshman seminar courses are often thought to be beneficial primarily for academically high-risk students. Data from a longitudinal study of the retention and academic performance of students who have taken freshman seminars and matched controls who have not taken freshman seminars suggest that this stereotypic image is invalid. In fact, among regularly admitted students, those with higher SAT scores who had completed a freshman seminar were retained at a higher rate than their classmates with lower SAT scores. At the other end of the academic spectrum, developmental studies students with freshman seminar experience show a modest improvement in both retention and cumulative grade point average. Results of the study are interpreted within the context of Tinto's model of institutional departure.

Since the first credit-bearing freshman seminar course was offered at Reed College in 1911, the popularity of extended orientation courses has fluctuated historically as institutions of higher education perceive an economic or a humanitarian need to enhance the success of entering students. Because of the increased diversity of students attending college over the

past two decades, the freshman seminar course has again emerged as a vehicle for easing the transition of students from high school or the work environment into the college community (Gordon & Grites, 1984). Along with this resurgence in popularity of freshman seminar courses has come a stereotypic image in the minds of many students and faculty that these courses are directed toward the academically weaker (high-risk) students.

Freshman seminar courses are generally designed to enhance student success by facilitating the integration of new students into both the social and academic aspects of the college community. Because the effectiveness of this integration process is difficult to quantify, improved rates of retention/persistence have emerged as acceptable measures of student success. However, many studies of freshman seminar courses and student success are archived in the data files of individual institutions and are rarely published for general dissemination (Fidler & Hunter, 1989). Data from many campuses consistently show that students completing a freshman seminar course have higher retention rates and improved academic performance.

Student retention is a major concern of most institutions of higher education, but it is of particular importance on commuter campuses where students are greater attrition risks (Herndon, 1984). The study reported herein examines the effectiveness of a freshman seminar program on an exclusively commuter campus where student and faculty participation in the course is entirely voluntary.

Method

The Freshman Seminar Course, KSC 101

KSC 101 is a five credit hour elective course patterned after the University 101 program at the University of South Carolina. The course teaches basic academic "survival skills" while acquainting students with campus support services and

screening them for written and oral communication deficiencies. Group process is employed to enhance the development of peer support groups and to foster faculty mentoring. Although student and faculty participation is voluntary, new students are encouraged during orientation to take the course, and faculty members are released from a regular class section during the quarter they teach KSC 101.

General Student Characteristics

The student body at Kennesaw State College is comprised entirely of commuting students. A large percentage of students hold jobs off campus or have family responsibilities that compete for study time. In fact, over half of the student population attends only evening classes. Since commuting students are considered greater academic "risks," this student population is well suited for longitudinal retention studies on "high risk" students.

During the observation interval, entering freshmen formed two distinct groups: (1) regularly admitted freshmen with a mean combined SAT score of 944; and (2) developmental studies (remedial) students with a mean score of 713. Additionally, a large percentage of undergraduate students (58% in the fall of 1988) are in the non-traditional age group, the mean age being 26. Not unlike other institutions of higher education, approximately 60% of the undergraduate student body is female.

Experimental Procedure

Students in this longitudinal retention study were selected from the entering freshman classes in three separate fall quarters (1984, 1985, and 1986). Those students who had completed KSC 101 comprised the experimental groups, and those without freshman seminar experience were the control groups. In order to reduce the control groups to a more manageable number, every third student was systematically selected from the institutional database for inclusion (Fowler, 1984). Only new freshmen with declared majors who completed more than ten credit hours their first quarter were included. No

transfer students, part-time students, or students with undecided majors were selected. However, developmental studies students—those requiring verbal and/or quantitative remediation upon admission—were considered as a separate “high risk” category for certain comparisons. Because of the unique requirements for developmental studies students, this group did include entering students with undecided majors and with fewer than ten credit hours completed during the first quarter. However, the mean quarter hours completed during their first quarter in residence were similar between the seminar-experienced and matched control groups.

Since student participation in the freshman seminar program is voluntary, the phenomenon of self-selection may introduce biases into the experimental groups. In order to minimize this effect, students in the experimental groups were individually matched with controls with regard to academic aptitude (combined SAT score $\pm 5\%$), academic performance (high school GPA $\pm 5\%$), and age (± 2 years) (Table 1). Gender matches were made whenever possible. Since student attrition is usually greatest in the first year of college, these matched groups were compared longitudinally for six quarters following admission, excluding summers. Specifically, the freshman seminar-experienced groups were compared quarterly with appropriate controls in the areas of academic performance (quarterly and cumulative GPA), course load (quarter hours completed), and student retention (percent of the original group enrolled for subsequent quarters). Both quarterly and cumulative GPAs were included in order to separate the KSC 101 grades from all other academic grades. Impact of the KSC 101 course grade persists in the cumulative GPA, but affects only the first of the quarterly GPA means.

Results

Regularly Admitted Students

The exclusion of part-time, developmental, and undecided students produced a student population that was academically low risk except for their commuter status. Within this category

Table 1
Descriptive Statistics of Matched Comparison Groups

	Seminar	Control
Regularly Admitted Students		
SAT - Combined	928 ± 108	915 ± 103
High School GPA	2.96 ± 0.49	2.93 ± 0.49
Age	18.5 ± 2.0	18.5 ± 1.3
% Female	63.5	62.3
Ns	114	114
Developmental Studies Students		
SAT - Combined	717 ± 94	720 ± 91
High School GPA	2.36 ± 0.46	$2.41 \pm .073$
Age	18.3 ± 0.5	18.4 ± 0.6
% Female	55	53
Ns	180	180

of new freshmen, no significant difference was found in the retention rates of seminar-experienced students when compared to a matched control group (Table 2). There were also no differences in the mean quarter hours completed between the two matched groups. For the six-quarter observation interval, seminar-experienced students averaged 13.2 credit hours per quarter while the control students completed an average of 13.3 hours. Except for the first quarter, quarterly grade point averages of the two groups were similar. However, the cumulative grade point averages of the seminar-experienced students were consistently higher than those of the controls. These differences were statistically significant for all but two quarters.

More importantly, when the mean combined SAT scores were computed for students retained in each quarter, an interesting pattern emerged (Figure 1). For the seminar-experienced group, the mean combined SAT score increased by 26 points, from 930 to 956, over the observation period. In contrast, the

Table 2
Regularly Admitted Student Group Comparisons

Quarter	1	2	3	4	5	6
Group Size						
Seminar <i>n</i>	114	104	98	87	81	75
Control <i>n</i>	114	100	92	76	66	66
Percent Enrolled						
Seminar	100	91.2	86.0	76.3	71.1	65.8
Control	100	87.7	80.7	66.7	57.9	57.9
<i>p</i>	-	ns	ns	ns	ns	ns
Quarterly GPA						
Seminar	2.81 ± 0.8	2.43 ± 0.9	2.89 ± 0.9	2.64 ± 0.9	2.62 ± 1.0	2.80 ± 0.8
Control	2.37 ± 0.8	2.26 ± 0.9	2.37 ± 0.9	2.59 ± 0.9	2.61 ± 0.8	2.56 ± 0.8
<i>p</i>	< .001	ns	ns	ns	ns	< .09
Cumulative GPA						
Seminar	2.81 ± 0.8	2.69 ± 0.6	2.66 ± 0.6	2.65 ± 0.6	2.67 ± 0.6	2.77 ± 0.5
Control	2.37 ± 0.8	2.39 ± 0.7	2.40 ± 0.7	2.45 ± 0.7	2.56 ± 0.6	2.52 ± 0.6
<i>p</i>	< .001	< .005	< .01	< .09	ns	< .04
SAT (Combined)						
Seminar	930 ± 106	941 ± 104	941 ± 101	948 ± 101	944 ± 102	956 ± 104
Control	915 ± 103	916 ± 105	915 ± 102	913 ± 103	909 ± 106	910 ± 103
<i>p</i>	ns	< .09	< .09	< .05	< .04	< .01

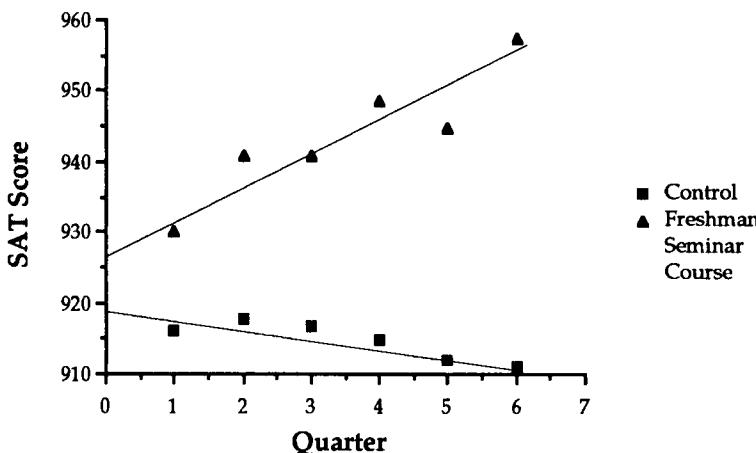


Figure 1. Mean Combined SAT Scores of Retained Students

matched controls showed a slight decline in mean SAT, from 915 to 910. Statistically, the SAT means were significantly different for the last three quarters.

The data suggest that the freshman seminar course disproportionately enhances the retention of students with higher SAT scores. Since this finding contradicts the common belief that freshman seminar courses primarily benefit academically deficient students, the following additional comparisons were made for confirmation (Tables 3 and 4). The matched groups were further divided by SAT score into those students with scores less than 900 (low SAT subgroup) and those with scores of 900 or better (high SAT subgroup).

In the high SAT subgroup, seminar-experienced students showed significantly higher retention rates for all six quarters with nearly a 20% difference in the seminar-experienced and control groups by the sixth quarter. Except for the first quarter, however, there were no differences between the two groups in quarterly and cumulative GPA. Similarly, mean

Table 3
High SAT Student Group Comparisons

Quarter	1	2	3	4	5	6
Group Size						
Seminar <i>n</i>	72	70	65	62	55	53
Control <i>n</i>	66	56	53	42	33	36
Percent Enrolled						
Seminar	100	97.2	90.3	86.1	76.4	73.6
Control	100	84.8	80	63.6	50	54.5
<i>p</i>	-	<.05	<.05	<.05	<.01	<.05
Quarterly GPA						
Seminar	2.96 ± 0.6	2.41 ± 0.9	2.51 ± 0.8	2.68 ± 0.9	2.60 ± 1.0	2.81 ± 0.9
Control	2.42 ± 0.9	2.29 ± 1.0	2.43 ± 0.8	2.66 ± 1.0	2.80 ± 0.9	2.62 ± 0.8
<i>p</i>	<.001	ns	ns	ns	ns	ns
Cumulative GPA						
Seminar	2.96 ± 0.6	2.69 ± 0.6	2.68 ± 0.6	2.64 ± 0.6	2.71 ± 0.6	2.78 ± 0.5
Control	2.42 ± 0.9	2.48 ± 0.7	2.48 ± 0.7	2.48 ± 0.8	2.68 ± 0.7	2.56 ± 0.7
<i>p</i>	<.001	ns	ns	ns	ns	ns

Table 4
Low SAT Student Group Comparisons

Quarter	1	2	3	4	5	6
Group Size						
Seminar <i>n</i>	42	34	33	25	26	22
Control <i>n</i>	48	44	39	34	32	30
Percent Enrolled						
Seminar	100	81.0	78.6	59.5	61.9	52.4
Control	100	91.7	81.2	70.8	66.7	62.5
<i>p</i>	-	ns	ns	ns	ns	ns
Quarterly GPA						
Seminar	2.55 \pm 0.9	2.49 \pm 0.7	2.42 \pm 1.1	2.55 \pm 0.9	2.68 \pm 1.0	2.77 \pm 0.5
Control	2.29 \pm 0.6	2.23 \pm 0.7	2.28 \pm 0.9	2.52 \pm 0.8	2.40 \pm 0.7	2.49 \pm 0.8
<i>p</i>	<.06	ns	ns	<.06	<.06	ns
Cumulative GPA						
Seminar	2.55 \pm 0.9	2.68 \pm 0.7	2.61 \pm 0.7	2.67 \pm 0.7	2.59 \pm 0.8	2.77 \pm 0.5
Control	2.29 \pm 0.6	2.27 \pm 0.5	2.29 \pm 0.6	2.40 \pm 0.5	2.44 \pm 0.5	2.48 \pm 0.5
<i>p</i>	<.06	<.005	<.03	ns	ns	<.08

quarter hours completed and mean SAT scores of retained students over the six quarters were not significantly different. Seminar-experienced students averaged 13.4 credit hours per quarter as compared to the 13.2 hours per quarter averaged by the controls.

In the low SAT subgroup, there were no significant differences in retention rates throughout the observation interval, and there were only sporadic differences in GPA and in mean credit hours completed. This finding implied that students with low SAT scores were less affected by the freshman seminar experience, which logically leads one to question the course's effectiveness with academically high-risk developmental studies students who enter college with low SAT scores and/or remediation requirements.

Developmental Studies Students

Within the developmental studies category of new freshmen (Table 5), 18% of the matched control group did not persist through the first quarter. In contrast, only two percent of the seminar-experienced group failed to complete their first quarter's work. In fact, retention rates of the seminar-experienced group were consistently higher than the matched controls throughout the observation period, and these differences were statistically significant for the first three quarters.

For all quarters of the observation interval, the mean cumulative GPAs of the seminar-experienced group were significantly higher than those of the controls. After the first quarter, however, quarterly GPAs were not different between the two groups. Finally, there were no differences observed between the two groups with regard to mean quarter hours completed or mean SAT scores of retained students. Seminar-experienced students averaged 10.2 hours per quarter while controls averaged 9.7 hours for the same time interval. Although no statistically significant differences were found, the mean combined SAT score of the seminar-experienced group increased by 25 points over that of the controls. As with the student

Table 5
Developmental Studies Student Group Comparisons

Quarter	1	2	3	4	5	6
Group Size						
Seminar <i>n</i>	176	142	124	102	80	69
Control <i>n</i>	148	119	103	83	62	46
<i>p</i>						
Percent Enrolled						
Seminar	97.8	78.8	68.9	56.7	44.4	38.3
Control	82.2	66.1	57.2	46.1	34.4	25.6
<i>p</i>	<.001	<.03	<.05	ns	ns	ns
Quarterly GPA						
Seminar	2.31 ± 1.1	1.57 ± 1.0	1.67 ± 0.9	1.98 ± 0.9	2.03 ± 0.8	
Control	1.61 ± 1.1	1.48 ± 1.0	1.63 ± 1.0	1.73 ± 1.1	1.70 ± 1.1	2.10 ± 1.0
<i>p</i>	<.001	ns	ns	ns	ns	ns
Cumulative GPA						
Seminar	2.31 ± 1.1	1.99 ± 0.8	1.93 ± 0.7	1.95 ± 0.6	2.01 ± 0.6	2.10 ± 0.5
Control	1.61 ± 1.1	1.64 ± 0.8	1.66 ± 0.8	1.70 ± 0.8	1.75 ± 0.8	1.89 ± 0.7
<i>p</i>	<.001	<.001	<.004	<.004	<.01	<.05

subgroup with high SAT scores, the retention of developmental studies students with higher academic aptitudes is disproportionately enhanced by the freshman seminar experience.

Discussion

The belief that freshman seminar courses are helpful primarily for academically weaker students is not supported by the results of this study. In fact, the enhanced retention of seminar-experienced students shown here was considerably greater among the group of students with higher SAT scores.

Because of the surprising nature of this finding, one is compelled to attempt an explanation of the results. Student retention has been studied exhaustively and has been shown to depend upon a number of different variables ranging from whether students live on campus to social and financial problems (Noel, Levitz, & Saluri, 1985). Tinto (1987) incorporates these variables into a model of institutional departure which, in summary, attributes student attrition to unsuccessful integration of the student in the academic and/or the social systems of the institution. Astin (1984) attributes student success to the extent of student involvement in the institution. He maintains that the more energy a student devotes to the academic experience (studying, campus participation, peer-faculty interactions) the more likely that student is to succeed.

How, then, does the freshman orientation seminar experience fit into this scheme to offset student attrition? A cursory examination of the typical content of freshman seminar courses reveals two major categories of activities which closely correspond to Tinto's model: (a) a strong academic "survival skills" component, consisting of study skills, test-taking, and time management exercises; and (b) a more subtle socialization component, consisting of group process activities that foster peer group establishment and faculty mentoring.

If the primary value of the freshman orientation seminar is to retain students who are considered academic high risks, one

would expect the study skills component of such courses to enhance the academic performance of students and, thus, reduce their attrition rate. Stupka (1986) supported this assumption by using matched groups for a longitudinal study of the effects of an extended orientation course on student retention. After one academic term, significantly higher GPAs, more credits earned, and higher retention rates were observed in the seminar-experienced group. In this study, regularly admitted students as a collective group showed no significant improvement in retention after completing a freshman seminar course. However, in four of the six quarters observed, the seminar-experienced group demonstrated significantly higher cumulative GPAs.

When regularly admitted students were split into high and low SAT score subgroups, however, a different pattern emerged. Retention enhancement by the freshman seminar experience was found to be greater with the students with higher SAT scores, the group less likely to require assistance with basic study skills. In fact, this subgroup showed no significant difference in quarterly and cumulative GPAs between seminar-experienced and control groups. Additionally, in none of the regularly admitted student groups was there a noteworthy difference in the mean number of quarter hours completed between seminar-experienced students and controls.

Although the evidence is not conclusive, the data strongly suggest that the college survival skills component of the freshman seminar experience is not the major force acting to enhance retention among regularly admitted students. Remaining for consideration, then, are those aspects of a seminar course that correspond to the socialization components of Tinto's model. The seminar course acquaints students with campus facilities and services that were established by the college specifically to enhance student success. Moreover, students taking the seminar course are strongly encouraged to participate in extracurricular events and activities. The social emphasis of the course may serve to ease the transition of

students into the campus environment and, thereby, increase their likelihood of success. Essentially, the course places academically capable students into a situation where they must devote more energy to social aspects of the college experience. In support of this interpretation, questionnaire data collected from seminar course students showed that 97% of the students responding had made two or more new friends as a result of seminar course participation.

Developmental Studies Students

A different situation may exist for developmental studies students. Since these students are admitted with academic deficiencies, academic "survival skills" may be a more important factor in their success. The data suggest this to be the case. Consistent with the observations of Wilkie and Kuckuck (1989), those high-risk students who completed the freshman seminar course showed a significant improvement in cumulative GPA over that of matched controls for the entire observation interval. Although Wilkie and Kuckuck did not find significant differences in retention, this study showed improved retention of seminar-experienced developmental students for all six quarters. When compared with matched controls, these differences were statistically significant for the first three quarters. The lack of significance in the last three quarters may be due to small sample size since attrition rates were quite high among developmental studies students. For example, only 82% of students without seminar experience completed their first quarter. Even if the academic skills component of the course proves to be helpful for remedial students, the social component should not be dismissed as inconsequential. Unfortunately, the design of this study does not permit precise discrimination between the relative impacts of the two seminar course components on student retention.

Another possible factor merits attention in future studies of this type. The retention of developmental studies students completing the freshman seminar course was greater than that of the subgroup of students with low SAT scores of regularly

admitted students with the same experience and a higher mean SAT score. Apparently, the developmental students benefitted by taking the freshman seminar course, or they may have succeeded at a higher rate because they had the combination of both remedial courses and a freshman seminar course. Unfortunately, the subgroup of students with low SAT scores of regularly admitted students was not identified as needing remediation, yet they may not have been sufficiently skilled to benefit as much from a freshman seminar experience as their classmates with higher SAT scores.

As an additional factor that may affect student success, Goldman and Gillis (1989) and Young (1982) have found a relationship between first quarter GPA and time required to graduate. Essentially, the higher the first quarter GPA, the less time is required for graduation. If time required for graduation can be considered a measure of student success, first quarter GPA is a variable for consideration in retention studies of both regularly admitted and developmental studies students.

Of all the student groups and subgroups in this study, only one—the subgroup of students with low SAT scores of regularly admitted students—did not show a significantly improved first quarter GPA with seminar experience. Interestingly, this same subgroup showed the poorest retention of seminar-experienced students. Although true cause-effect relationships have not been established between first quarter GPA and student success, this aspect may prove to be another of the myriad ways that freshman seminar courses help students succeed.



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