

Combining Academic Advising with a Freshman Orientation Course in an Integrated Baccalaureate–Medical Degree Program: Evaluation of the System

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The effectiveness of an advising system that combines a freshman seminar course taught by advisors for the students that they advise in a combined baccalaureate–medical degree program was analyzed. Students reported satisfaction with the seminar course, and more than 80% felt that they were more likely to seek out their advisor as a result of participating in this course. After the new advising system was implemented, the number of students receiving an A or B in a required biology course increased from nearly 70% to approximately 80%. In addition, students' first year grade-point averages increased modestly.

Students entering integrated baccalaureate–medical degree (BS/MD) programs face a unique set of problems. These students experience the same adjustment problems typical of freshman college students. These problems range from difficulties adapting to a new academic environment with new expectations and new rules, to worries about making new friends and learning about the location of various campus offices. When the stressors related to the accelerated nature of most integrated BS/MD programs become part of the student's burden, the problems typical of the first-year college student are magnified.

Many colleges attempt to address the problems of first-year students by requiring students to complete a freshman orientation course (Barefoot, Warnock, Dickinson, Richardson, & Roberts, 1998; Sagaria, 1979). Such courses cover subject matters designed to make adjustment to college-level work smooth for students. Covered topics can be divided into two main categories: academic achievement and social survival skills. The former introduces students to college-level work by focusing on topics such as time management, note taking, and the use of the library. Through the survival-skills course, students are encouraged to become involved in campus life and to foster early interactions among peers and with faculty members. Some studies suggest that orientation courses contribute significantly to student retention and early college success (Barefoot et

al., 1998; Boudreau & Kromrey, 1994; Colton, Connor, Shultz, & Easter, 1999; Davis-Underwood & Lee, 1994; Glass & Garrett, 1995).

The Sophie Davis School of Biomedical Education (SBE) at the City University of New York (CUNY) Medical School is a 7-year integrated BS/MD program located at the City College of New York (CCNY). Since its inception in 1973, the goals of the program have been to train primary care physicians for underserved urban areas and to increase the numbers of practicing minority physicians (Roman & McGanney, 1994). Approximately 60 students per year are accepted into the program. Until 1991, entering students were required to complete a freshman seminar course offered to all CCNY students. This course was not tailored to students in the integrated BS/MD program and was facilitated by faculty members or staff in the college. Entering students were also assigned an academic advisor from the SBE faculty or teaching staff. Beginning in 1991, a new system was instituted that combined the required freshman seminar course and a revised system of academic advising for the BS/MD program. In this brief report, we describe the impact of these changes.

The new system of freshman advising begun in 1991 at SBE was designed to address two problems. First, until 1991, advisors had been assigned to students, and as a result, many staff lacked a commitment to effective advising and were often unsure about their role. Second, students lacked ongoing contact with their academic advisors. Because the SBE curriculum is inflexible, students do not need extensive advising about course offerings.

Several steps were taken to address the problems of faculty commitment and confusion about the role of advisors in the BS/MD program. Perhaps most important, advisors were selected from faculty who expressed an interest in advising and agreed to work toward becoming effective advisors. This group was provided an *Academic Advisor's Handbook*, which contained information on the academic calendar and current curriculum, a list of resource persons, a section for students effectively

studying for freshman chemistry, and a list of commonly asked questions. Advisors attended a series of seminars addressing the school's curriculum and academic policies. In addition, a clinical psychologist conducted a seminar for advisors on common problems and methods for helping students deal with personal issues.

In an effort to foster relationships between advisors and advisees, advisors began teaching the college-required freshman orientation course (FO100) to their own advisees. This resulted in an immediate once-per-week, ongoing contact between advisors and their advisees for the first semester of the academic year. The intent of this contact was to provide an opportunity to form relationships that would go beyond FO100 into the remainder of the students' academic careers. The FO100 course provides valuable information regarding the college structure and requirements. It helps students develop college survival skills. The purpose of the orientation course is to make the transition to college life easier. By having SBE faculty teach FO100 to BS/MD students, the course could be tailored such that students were oriented to both CCNY and to the demands of the integrated BS/MD program.

We evaluated the effectiveness of the new freshman advising system by surveying students regarding the system and analyzing first-year student performance before and after the introduction of the system.

Method

Approximately 60 to 70 students enter SBE per year. These students are assigned to 1 of 6–9 advisors. FO100 is largely taught within advising groups, resulting in groups of 8–10 students.

Two survey instruments were used to monitor student perception and satisfaction with the orientation course and with their advisors. The first survey was administered to students entering SBE in 1990 who did not take part in the new freshman advising system and students entering SBE in 1991 who took part in the newly combined program. We used this survey to ascertain whether the new system had made any differences in the numbers of students who had identified and met with their advisors. The second survey was administered to monitor students' satisfaction with the orientation course and their levels of comfort with their advisors and with other SBE faculty members. Until 1998, survey return was voluntary, which resulted in low return rates. Because the 1998 surveys were administered in class, return rates were virtually 100%. Students did not write their names on surveys, which were collected from 7–9 different

advising groups; the means of completing the survey and of submitting it helped to assure confidentiality and anonymity.

Student performance before and after introduction of the new freshman advising system was assessed by comparing performance in an introductory biology course, BIO108. Computerized student records were reviewed for grades obtained in this course from 1986, 5 years prior to the introduction of the advising system, to 1999. BIO108 was chosen because it has been a course required of nearly all entering students for many years. Data are expressed as the percentages of students receiving an A or B in BIO108 from 1986 through 1990 versus the percentages of high grades received from 1991 through 1999. Similarly, computerized student records were used to calculate the mean first-year final grade-point average (GPA) of students.

Results

Prior to implementation of the new advising system, all students were assigned an academic advisor and informed of the advisor's identity; however, no contact was required between the advisee and advisor. Prior to the introduction of the new system (1990) and immediately after (1991), students completed surveys to assess the levels of acquaintance with advisors and student utilization of advising services (Table 1). The new system increased recognition and utilization of advising services. Prior to the new system, nearly all visits to advisors were classified as introductory visits. With the new system, reasons given for visiting advisors were to discuss poor grades (38%), discuss personal matters (47%), review records (11%), and discuss course offerings (5%).

Table 1 Percentage of students indicating knowing and using their advisors in the year before and after implementation of the new system

	1990	1991
Response rate (%)	24	40
Know advisor's identity	65	100
No. of meetings with advisor		
0	71	21
1–3	29	52
4–6	0	17
>6	0	10

Note. Numbers reflect percentages of positive responses to survey question.

A questionnaire designed to monitor students' satisfaction with their advisors and with the freshman orientation course was administered (Table 2). Students were encouraged to add comments in addition to a yes or no answer to each question. Many students commented that the orientation allowed them to get to know their advisors very well. Those students who did not feel that this relationship would ease their interaction with other faculty members felt that each professor is different and must be approached differently. Some students felt that they did not need help in time management, whereas others acknowledged that time management is a problem but that the session offered little to help them overcome their own procrastination.

The performance of students in BIO108 and the overall GPA following the first year were used to monitor the effect of the combination of the academic advising system and FO100 teaching on student outcomes in the first year (Table 3). The high school average for years before implementation of the new system ($M = 90.92$) was nearly the same as that after the introduction of the new system ($M = 91.60$), $t(12) = 1.46$, $p > 0.05$, $SE = 0.47$. The data show that mean GPA after completion of the first year of the program and performance in biology improved since the introduction of the advising system in 1991. The percentage of A and B grades in freshman biology prior to 1991 ($M = 66.40\%$) was significantly lower than it had been after introduction of the new system

Table 2 Percentage of students who answered yes to survey questions

Survey Questions	Affirmative Responses (%) (Response Rate %)				
	1995 (43.3)	1996 (53.6)	1997 (59.7)	1998 (72.0)	1999 (100.0)
Has FO100 made you feel more comfortable in seeking out your academic advisor if you have questions?	80.8	96.7	100.0	92.0	90.0
Do you feel that the relationship with your academic advisor will help to make you more comfortable in relating to other instructors?	50.0	93.3	91.9	67.0	63.0
Did the FO100 session on time management assist you in more effectively managing your time?	15.4	43.3	56.8	43.0	39.0

Note. The freshman advising system was implemented in 1991.

Table 3 Comparisons of first-year academic performance and entering high school grade average

Entering Year	Class Size	High School Grade Average (%)	A:B Grade in Biology (%)	1st Year GPA (<i>SD</i>)
1986	64	91.7	34:39	3.37 (0.44)
1987	70	91.6	28:42	3.02 (0.65)
1988	66	91.1	24:42	3.20 (0.51)
1989	62	91.1	29:37	3.15 (0.49)
1990	53	89.1	19:38	3.17 (0.45)
1991	70	90.0	31:37	3.18 (0.52)
1992	70	91.1	61:18	3.20 (0.44)
1993	69	91.3	23:45	3.30 (0.38)
1994	80	91.8	44:44	3.51 (0.35)
1995	60	92.0	42:40	3.58 (0.39)
1996	56	92.2	48:38	3.46 (0.46)
1997	62	92.0	37:39	3.37 (0.51)
1998	54	92.0	35:38	3.26 (0.38)
1999	67	92.0	36:36	3.25 (0.40)

Note. The freshman advising system was implemented in 1991.

($M = 77.78\%$), $t(12) = 2.63$, $p < 0.05$, $SE = 3.94$. Average GPA after completion of the first year similarly increased from before ($M = 3.18$) to after the introduction of the new system ($M = 3.35$); however, although the p value shows that the difference is significant, its relatively high value should be noted: $t(12) = 2.14$, $p = 0.054$, $SE = 0.08$.

Discussion

Linking a freshman orientation course with a freshman advising system was done to foster advisor-advisee relationships that would last well beyond the first semester of college. Data indicated that the course succeeded in terms of both student satisfaction and student success.

The surveys indicated that all students knew their advisors and had visited their advisors more frequently than did students prior to the introduction of the new advising system. Since the time of new-program implementation, results of course-end surveys showed that the majority of students felt that the combination of the advising system with the freshman seminar course resulted in a comfortable relationship between themselves and their advisors. Meetings outside of the orientation course are voluntary and have increased significantly since the introduction of the new system.

Numerous studies have suggested that college success is linked to students' participation in the college and bond formation with faculty members, staff, and other students (Nelson, Scott, & Bryan, 1984; Tinto, 1987). Orientation courses, such as FO100, often facilitate participation of students in the college community (Boudreau & Kromrey, 1994; Colton et al., 1999; Glass & Garrett, 1995).

Although the overall admission profiles did not change, modest improvement in student academic success was noted since the introduction of the new advising system. Admissions data include the entering high school GPA as shown in Table 3, but standardized test scores, such as the New York State Regents' Exams and the ACT (data not shown), were also obtained. Increases in both freshman biology performance and the overall first-year GPA were seen after the introduction of the new advising system. Because the admission standard was created from several criteria, all students should be capable of equal levels of work. According to our observations, neither the freshman biology course nor any other first-year course underwent significant change during the time of the study. In addition, we found no evidence of significant grade inflation. Proving a solid link between the advis-

ing-freshman orientation system and the students' performance in the first year is difficult. However, a correlation between the new system and performance is apparent.

The BS/MD orientation-advising system combines several key components, including early intervention in the freshman year of college, small-group teaching, and the fostering of advisor-advisee connections. The long-term effects of this system remain to be studied and may yield additional information that could benefit more traditional undergraduate programs and integrated programs, such as the CCNY BS/MD program, at other medical schools.

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