

# The Role of Professional Academic Advisors in Curriculum Development Grants

*Martha McMillian and William A. Ivy, Oklahoma State University*

*Academic advisors can make important contributions in implementing curriculum development grants received by universities. Presented in case study form is the advising and orientation plan developed for a National Science Foundation grant to prepare future science and mathematics teachers. This plan discusses comprehensive recruitment strategies, a specially designed orientation course, off-campus retreats and field experiences, and academic advising and career counseling. The plan fostered a sense of community among students and faculty, as well as a commitment to the project. This contributed to the success of the project and could contribute to similar grants as well.*

This article illustrates the important role professional academic advisors can play in implementing a major student-oriented curriculum development grant. The advisors' role was to design a model advising program to enhance the recruitment, orientation, and retention of freshman students participating in a National Science Foundation Grant project to prepare middle school science and mathematics teachers. The role of the faculty, on the other hand, was to design a model curriculum for the preparation of these future teachers. Included is a brief description of this grant, the Oklahoma State University DIRECT Project, and a review of literature concerning the importance of advising and orientation for college freshmen. Particular attention is then directed to the development and implementation of the advising and orientation model and how it can be generalized to other programs. The conclusion stresses the need for the expertise of professional advisors in the design and implementation of curriculum development grants.

## Overview of the DIRECT Project

In November 1986 Oklahoma State University received \$1.1 million from the National Science Foundation to develop a model middle school teacher preparation program that would address problems of decreasing test scores in mathematics and science among American school-age youth (Mills, Eubanks, & Choike, 1986). The project name, DIRECT, is an acro-

nym for "Development, Implementation, and Research for Educating Competent Teachers." Early on, the project directors recognized that failure to provide effective recruitment and quality advising and orientation could result in loss of funding for the project. Thus, the focus on recruitment of students and their need to experience a successful transition to college became an integral part of the project.

The review of literature that follows not only supports the decision to include an orientation, advising, and retention program in the grant proposal but also describes specific activities essential for the success of that program.

## Review of Literature

Literature in the area of retention and the first year experience consistently indicates that the first few weeks of the freshman year are a crucial period when students decide whether to remain at the institution (Noel, 1985). However, the question of what constitutes a successful orientation and retention program elicits multiple responses. Tinto (1975) and Kramer, Moss, Taylor, and Hendrix (1985) suggest that the stronger the level of social and academic integration, the greater the student's commitment to the institution and to college graduation. Similarly, Astin (1977) states that students are more likely to be satisfied with their environment and to remain in school when they are actively involved in campus events and have the opportunity to interact freely with academic advisors and faculty. Kramer et al. (1985) found that students who receive help in career and academic planning and who have a commitment to an educational goal are more likely to persist, as are those who have an overall understanding of higher education.

Katchadourian and Boli (1985) agree that students' understanding of the purposes of higher education is an important component of retention. These purposes can be articulated in a freshman orientation course or seminar, but more often than not, such courses have been perceived as lacking substance and simply being "vehicles for helping students feel more com-

fortable and accepted in a new environment" (Gordon & Grites, 1984, p. 319), rather than courses with a significant academic focus. Several authors (Astin, 1977; Gordon & Grites, 1984; Kramer et al., 1985; Tinto, 1975) propose, among other topics, that the following be included: study skills, academic planning, college degrees and curriculum, policies and procedures, vocational and career planning, environmental adjustment, sexuality, and leadership skills.

Laff, Schein, and Allen (1987) maintain that academic advisors "must be responsible for blending the expertise of both academic and student affairs so that they can help students integrate their college experiences" (p. 10). Similarly, developmental advising is defined by Winston and Sandor (1984) as "a systematic process . . . intended to aid students in achieving educational, career, and personal goals through the utilization of the full range of institutional community resources" (p. 9). Both processes call for the advisor to serve as a boundary-spanner, assisting students in making meaningful connections between their in- and out-of-class experiences. Kramer and Washburn (1983) state that such developmental advising should be a crucial component of an orientation program.

Kramer et al. (1985) maintain that students are not likely to persist at an institution or in a particular academic program that does not seek to understand and fulfill individual student needs. On the contrary, students who believe in the quality and responsiveness of the institution are more likely to persist. A description follows of how this responsiveness was developed and instituted through the advising and orientation program in the DIRECT Project.

### **Advising and Orientation Plan**

Recognizing that student recruitment and retention were crucial elements in the success of the DIRECT Project, the project directors included in their proposal the development of a special orientation course for DIRECT Project students. Two advising professionals became involved at this point, and in fact, a half-time advising coordinator position was later established and filled by one of these individuals. Her role was to manage the advising and orientation components of the project, which included a comprehensive recruitment plan, the orientation course, off-campus retreats and field expe-

riences, and academic advising and career counseling. A detailed outline of each stage of the plan follows, along with a synopsis of the progress that has been made in each area.

### **Recruitment Plan**

The two advising professionals took leadership in developing the recruitment plan that included a direct mail campaign, follow-up phone calls, and public relations efforts.

### **Direct Mail Campaign to Students and Teachers**

The university's Prospective Student Management System was used by the advisors to generate a list of names and addresses of high school seniors with ACT composite scores of 18 or above who planned to major in science, mathematics, or education. Likewise, a list of students who were undecided about a major or career but who had achieved an ACT mathematics or science **subscore** of 20 or above was obtained. A total of 560 names was obtained through this system, and the project advising coordinator drafted personalized letters that outlined the project and its relationship to the students' academic and career goals. Included with each letter were a brochure describing the project and an information request card that students could return. In addition, letters were sent to 2,000 high school mathematics and science teachers asking them to circulate information about DIRECT among their top graduating seniors.

**Follow-up Letters and Phone Calls** To illustrate responsiveness to student inquiries, additional letters and detailed descriptions of the degree options and curriculum were mailed to those students requesting additional information. Several days later, the advising coordinator made personal telephone calls to each student to answer specific questions and offer further information.

**Public Relations** Press releases about the DIRECT Project were sent to newspapers throughout the state and to national newsletters to further publicize the project, and more than 40 formal and informal presentations were made to educators, high school students, parents, and university faculty and administrators. Perhaps the most personal contact with students was made during summer freshman enrollment, when students actually made their decisions concerning the degree programs and colleges in which they would enroll. The advising profes-

sionals and the project directors met with academic advisors campus-wide to describe in detail the DIRECT Project goals and the prescribed curriculum so that potential students might be informed about the project. The enthusiasm exhibited by these advisors was often the determining factor when students made the decision to enroll in the DIRECT Project.

### *Freshman Orientation Course*

Effective student retention was considered as important as recruitment. A special DIRECT orientation course included a general orientation to the university, an introduction to the DIRECT Project, and consideration of special issues surrounding a career in teaching middle school science and mathematics. **Because** these students had committed to a specific major very early in their college experience, career exploration was another important component of this special course.

The study of a career in education included a discussion of *A Nation at Risk* (National Commission on Excellence, 1983) and more recent education reports such as the Second International Study on Mathematics (McKnight et al., 1987). Through such readings, students developed an awareness of problems in education, including those in higher education. This general discussion of educational issues was followed by readings and discussions on the purposes and goals of the DIRECT Project and its curriculum, a component thought to be especially important to the commitment and retention of DIRECT students. Thus, Katchadourian and Boli's (1985) desire that faculty and administrators articulate educational purposes and directions to students was easily assimilated into the DIRECT course.

This class was taught in a highly interactive style that Gordon and Grites (1984) believe should be employed in freshman orientation courses in order to set the tone of acceptance, caring, and belonging. This method is also thought to be most effective with middle school students and, hence, later transferable to DIRECT students' own classrooms.

### *Off-Campus Retreats and Field Experiences*

Katchadourian and Boli (1985) note that informal interaction with faculty is essential for the retention of students. Very early in the academic year, advisors linked the social and academic lives of DIRECT students through out-

of-class interaction with faculty at a workshop and picnic held the evening prior to the beginning of regular classes. Later in the semester students, university faculty and advisors, and public school teachers had another opportunity for informal interaction. A weekend retreat was held at a university-owned campground near campus where simulation games and other informal science learning activities were used to illustrate methods of teaching middle school students.

Such opportunities for students and faculty to share in learning experiences were invaluable in setting the stage for a comprehensive mentoring program. In their second semester of college, DIRECT students were required to observe a middle school classroom for a minimum of twenty-four hours. Potential mentor-teachers were carefully selected by the advising coordinator in the hope that these teachers would become role models, sharing not only their ideas about teaching styles and methods but also their views about the profession of teaching. To further develop the students' identification with the project, a weekly seminar was developed by the advising coordinator to discuss the field experiences.

### *Academic and Career Advising*

The DIRECT advising coordinator recognized the critical role academic advisors would play in the project and, therefore, made special efforts to inform campus advisors about the program and to supply them with information on the DIRECT curricula. DIRECT students were required to take rigorous mathematics and science courses; therefore, initial course placement was crucial for success. Advisors often made difficult placement decisions in consultation with the project directors, who were themselves faculty members in those disciplines. Referrals by advisors to tutoring, counseling, and other learning skills assistance was also a crucial factor in students' academic success.

Advising in DIRECT also included providing information about admission to teacher education and providing career counseling about the profession of teaching. In an era of teacher education reform, this advisement included not only the relaying of information about complicated testing and certification procedures but also the calming of fears about entering a profession filled with public controversy and minimal economic rewards. Again, the effectiveness

of this counseling greatly influenced students' attitudes and commitment to the project.

### **Student Enrollment and Retention**

DIRECT Project recruitment resulted in a 1987 entering class of twenty-six students who scored above both the Oklahoma State University (OSU) and the national average on the ACT. DIRECT students had an average ACT composite score of 23.9 compared with the university's overall average of 20.8 and a 1987 national average of 19.2. Likewise, the average composite score for DIRECT students was higher than that of entering freshmen in either the College of Education or the College of Arts and Sciences, the two colleges that collaborated on the project. DIRECT ACT subscores in science and mathematics also far exceeded the 1987 OSU freshman average. ACT math subscores averaged 23.0 for DIRECT students, although the OSU math average was 18.6; the DIRECT science subscore was 27.2 compared with an OSU average of 22.7. Thus, both in terms of total number of students initially recruited into the project and in terms of quality, the results of project recruitment efforts were encouraging.

Normal attrition occurred during the first eighteen months, and the configuration changed slightly from the original 26 students. Five changed their majors to different teaching areas or levels of education, and six left the institution for personal, financial, or academic reasons. The retention rate at the university for the first year DIRECT class (including major changes) was 76%, 10% higher than that for all new freshmen at OSU that year.

To determine the relative effectiveness of the various recruitment strategies, the advising coordinator surveyed the first class of DIRECT students and analyzed their responses. The results indicated that personal letters to students and teachers, coupled with an advising staff knowledgeable about DIRECT, were key in influencing students' decisions to enter the project. An important factor for those joining the project as sophomores was the influence of friends either enrolled in the project or aware of DIRECT. It is noteworthy that the project influenced seven students' decision to attend OSU rather than another institution.

When questioned about their intent to complete the program, all but one of the students believed that they would complete the DIRECT Project curriculum; thus the commitment to re-

main in the project is high. The one student responding "not sure" was a very capable student who was weighing her desire to work with children against the challenge and prestige of a career in engineering, along with her parents' wishes for her to pursue a career in that field. Such dilemmas have traditionally been faced by top students in mathematics and science education.

In an attempt to assess esprit de corps among the DIRECT students, several questions were posed that related to the students' comfort with different aspects of university life. Twenty of the 22 DIRECT students taking the survey indicated that they were comfortable in their living groups, campus activities, and special DIRECT courses and activities. The same number indicated comfort with their professors and the other DIRECT students. These responses, along with informal observations, confirm that a strong sense of community had developed among the students and that the objectives of the orientation package were being met.

The same recruiting techniques used in attracting the first class resulted in a 1988 DIRECT class of 36 students. Although slightly below the previous year's achievement as measured by the ACT averages, they were equally as enthusiastic. These 36 students responded much like the first class in evaluating the various recruiting techniques employed. Again, personal letters and advisors were by far the chief means of finding out about the project. Two students were influenced to attend OSU over other institutions by the DIRECT Project; 35 of the 36 students plan to complete the DIRECT curriculum; and all but two are "comfortable" with university life, their professors and DIRECT students in general. Each week new students inquire about joining the project. Thus, DIRECT has developed a reputation as a program where students feel comfortable and committed to an academic goal.

### **Conclusion**

This case study outlined the attempts of university faculty and professional academic advisors to enhance the success of a major curriculum development grant through effective recruitment, advising, and orientation of freshman students. The initial question that the authors sought to address was "How has the involvement of professional academic advisors contributed to the success thus far achieved by

the grant?" Several contributions can be readily identified. The advising professionals assisted in the development of the recruiting strategy through their knowledge of OSU's Prospective Student Data Base and how it could be used to identify DIRECT prospects. They provided easier access to key advisors campus-wide through their roles as advising coordinators. Through the efforts of the advisors, orientation was linked to other project components, including recruitment, field experiences, mentoring, and academic advising. Social events were used to set the stage for an effective interactive orientation class, and informal events were planned to acquaint students with faculty members and to pair them with potential mentors. Activities such as these were deliberately designed by the professional advisors to assist new students during the transition from high school to college because such assistance is reported in the literature as being crucial for student retention.

In the final analysis, recruitment, orientation, advising, and retention became such key components in the project that the half-time advising coordinator position has now become full-time for the purpose of managing these functions. The creation of such a position formally recognizes the fact that advising and other student-oriented functions cannot be ignored by project faculty as they develop the curricula for the project. Thus, cooperation between professional advisors and faculty has proven essential to the success of this project.

Such cooperation further acknowledges that advisors serve a very important role in the academic functions of an institution. The strategies used for recruitment, orientation, advising, and retention were key ingredients needed for successful implementation of the new curriculum, and as institutions develop similar projects, the tactics used in the DIRECT Project can easily be adapted.

## References

- Astin, A. W. (1977). *Four critical years*. San Francisco: Jossey-Bass.
- Gordon, V. N., & Grites, T. J. (1984, July). The freshman seminar course: Helping students succeed. *Journal of College Student Personnel*, 25(4), 315-319.

- Katchadourian, H. A., & Boli, J. (1985). *Careerism and intellectualism among college students*. San Francisco: Jossey-Bass.
- Kramer, G. L., Moss, R. D., Taylor, L. T., & Hendrix, L. J. (1985). Why students persist in college: A categorical analysis. *NACADA Journal*, 5(2), 1-17.
- Kramer, G. L., & Washburn, R. (1983). The perceived orientation needs of new students. *Journal of College Student Personnel*, 24, 311-319.
- Laff, N. S., Schein, H. K., & Allen, D. R. (1987). Teaching, advising, and student development: Finding the common ground. *NACADA Journal*, 7(1), 9-15.
- McKnight, C. C., Crosswhite, F. J., Dossey, J. A., Kifer, E., Swafford, J. O., Travers, K. J., & Cooney, T. J. (1987). *The underachieving curriculum: Assessing U.S. school mathematics from an international perspective*. Champaign, IL: Stipes Publishing.
- Mills, T. J., Eubanks, I. D., & Choike, J. R. (1986). *The DIRECT (Development, Implementation, and Research for Educating Competent Teachers) middle school science and mathematics project*. A proposal submitted to the National Science Foundation Division of Teacher Preparation and Enhancement: Program for Preparing Middle School Science and Mathematics Teachers. Oklahoma State University, Stillwater.
- National Commission on Excellence (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: U.S. Department of Education.
- Noel, L. (1985). *Increasing student retention*. San Francisco: Jossey-Bass.
- Tinto, V. (1975). Dropout from higher education: A theoretical system of recent research. *Review of Educational Research*, 49, 89-125.
- Winston, R. B., & Sandor, J. S. (1984). Developmental academic advising: What do students want? *NACADA Journal*, 4(1), 5-13.

*Martha McMillian is Director of University Academic Services and Adjunct Assistant Professor of Curriculum and Instruction. Previously, she served as Coordinator of Advisement Services in the College of Education and Course Developer and Coordinator of Students for the DIRECT Project. William A. Ivy is Director of Undergraduate Student Service Programs in the College of Arts and Sciences and Adjunct Assistant Professor in Applied Behavioral Studies. He served as a course developer for the DIRECT Project and participated in the design of its recruitment plan. Address correspondence concerning this article to them at 201 M Whitehurst, Oklahoma State University, Stillwater. OK 74078-0011.*