Quantitative. Certainly not all jobs require higher level mathematical ability, but most require some computational skill. Students who are able to demonstrate such ability will likely have more opportunities for employment and advancement during their careers.

Alternatives to specific courses may be more difficult to determine in the quantitative skill area than in others. However, advisors should encourage students to refine those skills through student club and organizational activities or through assisting teachers, counsellors, or other staff with various projects that require such tasks as recording and classifying information, estimating (costs, measurements, times, amounts), or using precision instruments.

Students should not necessarily be limited to quantitative skills; they need to develop familiarity with computers, their applications, and their limitations. In the future, workers in most occupations will eventually need a certain computer literacy in order to function capably in their jobs and careers. Whatever materials. resources, courses. or activities are available to the advisor should be utilized to their fullest in this critical skill devdopment effort.

CONCLUSIONS AND IMPLICATIONS

Obviously, different careers require different degrees of the skills described above at different times. and often more than one skill is required at the same time. The important point is that students need to develop each of the skills to a degree that will enable them to function effectively in a variety of careers. The skills are career-transferable, irrespective of vocational development stages, vocational environment or personality characteristics, and vocational aspirations.

Breen* and Wallace, et al identified other skills that also have relevance to this discussion; they include valuing, creating (artistically), enduring (physically and psychologically). entertaining, and obviously reading. All of these skills are relevant for a variety o f workers. Whether students aspire to be managers, lawyers, social workers, performing artists, teachers, accountants, zookeepers, or computer programmers, they will need such skills to succeed in their careers.

The skilled student in the future will:

- enjoy more the opportunities for employment and advancement
- be adaptabk to the changing nature of the labor market, and be able to develop new areas of expertise having mastered the common skills.

The skilled advisor in the future must be one who recognizes the need for such broadly applicable career skills, and designs learning experiences for students to help them develop those skills. The skilled advisor in the future must be one who maintains his/her awareness o f the significant social, economic. and technological changes that are being experienced more rapidly and more radically than before. The skilled advisor in the future must be one who assumes some educational responsibility for insuring that students are able to compete in the everchanging, and demanding labor market. The skilled advisor in the future must use a skills approach to career development.

*Breen, 1981.

*Wallace, et al., 1982.

Maximizing Career-Oriented Academic Advising at the Departmental Level

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INTRODUCTION

A growing number o f undergraduates arc asking their academic advisors this question: "Which o f these courses will help me get a job?" Many departmental instructors advising undergraduates have difficulty responding to such an inquiry. Based upon his experiences at Virginia Commonwealth University, John Borgard notes that faculty advisors would be better able to serve departmental majors i f those advisors were more pragmatic and worked more closely with practitioners and employers to assist undergraduates with career planning.'

It is difficult to implement Borgard's strategy. Only so much o f a faculty advisor's time can be spent in career-related counseling, and that time mud be used to the fullest, because more assistance is demanded by undergniduates. leaving less time to spend with individual departmental majors.

One strategy to maximize career-oriented academic advising is to have a departmental course in career planning. A course has been developed at the University of North Dakota's Department of Geography, titled "Applied Geography—Careers in Geography," and it has been instrumental in improving the quality of information given to undergraduates concerning job prospects. The course has laid the groundwork for stronger career-oriented connections between faculty and practitioners for advising students. and is a means to serve them in a more pragmatic fashion. This article suggests that faculty advisors in other disciplines can use a career-planning course as a strategy at their institutions for the benefit of their departments and their advisees.

BACKGROUND TO THE COURSE

Courses in career-planning at the departmental level are not unique. particularly within geography departments. Geographers at Southwest Missouri State University have offered a successful course since the mid-1970s.' Variations of this course are to be found in many geography departments in the United States. e.g., University of Montana and

'John H. Borgard. "Toward A Pragmatic Philosophy of Academic Advising," *NACADA Journal* 1 (1981).

'Milton D. Rafferty. "The Geography Placement Seminar: A Course Syllabus," *The Professional Geographer* 29-2 (May 1977), 215-217.

University of Missouri-Columbia. Between 1978 and 1981, occasional lectures on career-planning were presented at the University of North Dakota's Department of Geography. However, as the number of geography majors increased during that period, requests for career-related counseling rose dramatically. Because many of the inquiries by those majors were focused upon similar concerns, the faculty member responsible for undergraduate advice was spending much of the advising time repeating the same information. Such repetition obviously reduces opportunities for handling other academic advising issues and is wasteful of the time set aside for the advisee as well as for the faculty advisor. In an effort to minimize the problem and maximize service to departmental majors, a formal course in career-planning was offered in the Spring of 1982.

Before presenting the course "Applied Geography—Careers in Geography," it was necessary to develop a sound syllabus, and also solicit ideas from practitioners and employers outside of academe. During the Fall of 1981, contacts were made with geographers employed at various private corporations and levels of government. It must be pointed out that geographers are employed in a diverse set of occupations, for example:

- Cartography has been a major field of work for geographers, who are using computers to produce a new form of maps.
- Geographers are employed in land use planning, in industrial site location, retail facility location, and residential development.
  Positions as meteorologists and climatologists are held by geographers.
- Travel agencies and transportation corporations employ geographers.
  More geographers are holding Jobs involving the interpretation of satellite imagery; this is known as remote sensing and is extremely popular as a career orientation for many of the undergraduates at the University of North Dakota.

Keeping in mind the career interests of the departmental majors, practitioners and employers were invited to participate in the course as guest speakers. Two specialists in remote sensing, three land use planners, a Public Service Commissioner, a cartographer, and a meteorologist were able to accept invitations. These practitioners shared a range of insights to career-planning with the class, and their campus visits also were beneficial for geography faculty. Contacts with practitioners helped to expose academicians to new developments and growth in their field and this kind of professional growth is important for maintaining a department's vitality.[1]

Not only were practitioners and employers invited to participate in the course; but also the local director of the institution's Office of Career Planning and Placement. This officer provided two extremely useful guest lectures, one on resume preparation and another on interviewing techniques. The course was extremely attractive to the undergraduates who enrolled, because it had the support of this University staff member and that of the practitioners and employers.

[1] Thomas J. Wilbanks and Michael Libber, "A Departmental Approach to Professional Growth for Faculty Members," *The Professional Geographer*, 30:4 (November 1978), 349-353.

CAREER-ORIENTED COURSE ASSIGNMENTS

Interest in the class was stimulated by the posting of the course syllabus, and 21 students enrolled in the first offering. The class roster listed seven seniors from two different graduating classes, seven juniors, six sophomores, and no freshmen. Of the 21 students, 20 completed the class.

Students were given a variety of assignments designed to enhance their job-seeking skills and increase their exposure to career opportunities within geography and related fields. Three assignments dealt with improving writing abilities:

1) a minor critique of a professional article dealing with practical applications of geography training;
2) a major critique of an article from a professional journal on some aspect of practice outside academe; and
3) a short research proposal on a topic of the individual's interest dealing with solving a "real-world" problem through application of a geographical approach.

These assignments were useful in providing the faculty advisor with information for identifying students who ought to take either remedial or advanced composition courses to improve their writing. It is difficult to make students aware that they must have good writing skills for most jobs; however, when practitioners told them so in the course, they more willingly considered taking the recommended composition classes.

Three other assignments were given:

1) preparation of a resume;
2) preparation of a curriculum vitae; and
3) preparation of job contact cards.

Each of these three assignments was used to help students to be better prepared when seeking employment for the summer or for that first permanent position.

The preparation of a resume and a curriculum vitae have benefits beyond immediate use by the student in job-hunting. For example, a faculty advisor may use the documents to write letters of recommendation; assess the student's previous work-related experiences and extra-curricular interests to assist in advising for future courses, internships and jobs.

Since the faculty advisor may not be aware of firms or governmental agencies engaged in the fields of interest of a particular student, each undergraduate was required to turn in a set of job contact cards. These cards were to contain the name of a firm, its address, telephone number, and name of a personnel officer. The intent was to develop a job directory for use by the students and the faculty advisor for later job-hunting activities. Work on that document will be an on-going activity during consequent course revisions made in light of student reaction to the class.

STUDENT REACTION TO THE COURSE

The undergraduates were enthusiastic and receptive to hearing from the remote sensing specialists, land use planners, and other practitioners who came to speak to the class. In

every instance, these "outsiders" gave information to students on types of courses that would be advantageous before seeking employment in their field. In most cases, the practitioners agreed to serve as consultants for future curriculum revisions. Departmental majors also made suggestions for future guest speakers. They particularly wanted to hear from remote sensing specialists, from economic geographers in non-government service, and from personnel managers from a variety of corporations.

Overall. students were satisfied with the course. In a discussion assessing the class at the end of the Spring Term, students suggested that the course would be more attractive if several two-day field trips were made to visit government offices and corporate headquarters where geographers are employed in the tri-state area of North Dakota-South Dakota-Minnesota. Studentshad been encouraged to take a sponsored field trip to the job fair at the 1982 South Dakota State University Geographical Convention, and many indicated an interest in attending more job fairs, so there will be a field trip to the Brookings, South Dakota program in 1983. We are also investigating the possibility of taking a vanload of departmental majors to a national job fair being held in conjunction with the annual convention of the Association of American Geographers in Denver in 1983.

CONCLUSION

Reflecting upon the course from the standpoint of a faculty advisor, this class was worthwhile. It will be offered again. albeit with some modifications. First. there is a need to make it available to departmental majors *before the semester of* their graduation; it may be wise to offer it in the Fall Term of each academic year. Second. there is a need for better record-keeping on the overall academic advising of each departmental major; hopefully part of this problem will be solved with the new procedures for documenting pre-registration and enrollment changes. A system of mandatory academic advising is being adopted at the University of North Dakota, emphasizing more interaction between faculty advisor and advisee in long-range course planning. Thud. there is a need to create a fund for future guest speakers and for any projected field trips. This year's guest speakers were sponsored and funded by their firms or governmental agencies, but their tightening budgets may eliminate future visitations, so small grants must be sought to continue the program. Finally, there must be active advertising of the course directed towards undergraduates who might wish to consider taking geography as their second major or who are undecided with respect to a major. Despite warnings that geography is floundering as an academic discipline,[1] job opportunities outside academe do exist. Informing graduates and faculty advisors in other departments of career opportunities in geography is one step to building better intracollegiate ties. Maximizing career-oriented academic advising at the departmental level must be done in cooperation with other members of the university and also with practitioners in the field. Together, we can develop successful strategies for creating and implementing what Borgard has referred to as pragmatic philosophy of academic advising.

[1]Malcolm G. Scully, "Academic Geography: Few Students, Closed Departments, Fuzzy Image," *The Chronicle of Higher Education*, 24:13 (26 May 1982), 1, 12.

Organizational Change and the Improvement of Faculty Advising

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The literature on faculty-based advising has progressed significantly over the past five years, reflecting a growing consensusin higher education about the importance of faculty advising and the need to develop improved advising programs on American campuses. However, the literature to date has emphasized the advising process—the philosophy of academic advising, the need for improved advising. alternative models and practices. the development of necessary skills and attitudes and different measures of impact—without engaging directly the problem of integrating advising improvement within a complex professional organization. Current research and experience has given rise to a more sophisticated conception of advising than was available earlier, but no change strategy has emerged that would help an academic administrator or advising specialist tailor an approach to advising improvement that fits the unique culture of higher education.

Whet is absent in the effort to improve academic advising is an understanding of the institutional framework that currently restrains academic advising. and a conception of a change strategy that fits that framework. Advising specialists, and often academic administrators. remain the staunch advocates of advising improvement on the college campus. However, to the extent that they remain marginal to the faculty culture that governs faculty conduct within an institution, they remain relatively powerless to effect improvement. Advising specialists and administrators dedicated to advising improvement need a change strategy that accommodates faculty culture and challenges the institutional constraints that impede progress toward improved faculty advising.

Clearly, these comments assume that. for philosophical and practical reasons, advising by faculty is essential to an excellent academic advising program. The philosophical justification is embedded in the nature of the educational enterprise, and the practical justification is supported by at least two points. First, faculty have knowledge about the disciplines not held by others. This makes for better advising. Second, most institutions can not afford to employ advising specialists to do all that needs to be done. Despite competing demands on their time. the faculty resource must be used. We know. then, that faculty are necessarily at the center of academic advising on most campuses, however, the faculty member's dual and sometimes conflicting responsibilities must be recognized. Each institution must find the proper mix between professional and institutional demands on faculty and support each rok.