Program Area	89.4%
Program Planning	84.0%
Placement Training	79.0%
Career Information	72.6%
Job Placement	66.5%

C. When asked about the usefulness in their present employment of five competency areas the following were "Very Useful" or "Useful":

Conclusion

The Institute of Agricultural Technology's eleven program areas were found to be very effective in meeting the industry's technical requirements for graduates. These programs continue to graduate students with quality technical training in order to meet the employment demand of Michigan. Eighty-nine percent of the graduates live and work in the state.

University administrators, coordinators, and faculty, along with the public and many business communities are proud to know that such an education is still being offered to young men and women in the state of Michigan.

"Is there still a place for 2-year technical programs?" Yes, programs such as the Institute of Agricultural Technology fulfill the basic mission of Land-Grant institutions. By surveying the graduates, one can assess the programs educational effectiveness in relation to it's graduates employment satisfaction and success. What are the results of your program assessment?

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Case Study
Students' Perceptions of Academic Advising

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Introduction

During times of declining enrollment, colleges of agriculture are looking for effective ways to recruit and retain students. Effective academic advising is recognized as an important factor in achieving this goal. In addition, good advising promotes several desired outcomes: adjustment to college life, selection of appropriate courses and majors, development of career possibilities, placement in appropriate jobs, and rapport with alumni (Noel, Levits and Saluri, 1985). Because of these goals as well as an ongoing concern for understanding and improving academic advising, the Washington State University (WSU), College of Agriculture and Home Economics Improvement of Instruction Committee conducted a comprehensive study of academic advising in their college. In consultation with the Director of Resident Instruction, students in the College were surveyed to determine their perception of academic advising at Washington State University.[1]

Objectives

The broad goal of the study was to determine how advising in the college might be improved based on students' perceptions of what advisors are doing compared to what they think advisors should be doing. More specifically the objectives were to:

1. identify important academic advising functions (responsibilities of academic advisors) as reported in the literature.
2. determine academic advising needs within the college by comparing students' perceptions of how well academic advising functions are being fulfilled with the extent to which they feel these functions should be fulfilled.
3. determine whether selected variables differentiate students' satisfaction with academic advising.
4. make recommendations for improving academic advising.

Procedures

A questionnaire was developed and administered to collect data for the study. It obtained information about the students' advisors, advising procedures, and demographics in addition to students' ratings of ad-

vising functions. Thirty five academic advising functions were identified through a literature review and assessment of survey instruments designed to evaluate academic advising. These functions were grouped into seven categories: (1) academic needs, (2) rules and regulations, (3) course selection and information on majors, (4) career development, (5) counseling, (6) advising climate, and (7) general. Students rated each of the thirty five functions for: (1) the extent to which it "should be fulfilled by an advisor" and (2) the extent to which it "is now being fulfilled by my advisor." Ratings were done on a four point scale where 0 = not at all, 1 = to a very little extent, 2 = to some extent and 3 = to a great extent. Academic advising "need" was determined by applying a T-test to determine if the differences between the mean scores of the "should be fulfilled" and the "is being fulfilled" for each function was significant at the .05 level. The questionnaire was reviewed several times by the committee and pre-tested before being administered.

Two hundred fifty questionnaires were distributed to students in ten selected courses taught in the college during a two-week period in the spring of 1987. Courses were selected to obtain a representative sample of students in the college by grade level, major, and G.P.A. Questionnaires were either completed in class or returned at the next class session. This approach allowed the researchers to explain the study and answer students' questions before, during, and after completion of the questionnaire. It also ensured a good return rate in a short period of time. Two hundred twenty one questionnaires were usable. This represents about 18 percent of the undergraduate students advised in the college.

Meeting Tests of Rigor

The trustworthiness of a study is generally based on four criteria: validity, reliability, objectivity, and generalizability (Cuba and Lincoln, 1981). Careful development and pre-testing of the questionnaire provides the basis for validity. Development of the questionnaire based on previous studies and instruments, ongoing review by the two researchers and the Improvement of Instruction Committee, and pre-testing the questionnaire with students outside the college makes the case for construct, content, and face validity. Careful wording of the questionnaire, the presence of the researchers during data collection, and the high percentage of usable questionnaires provide evidence for reliability. The team approach (which included careful analysis of assumptions) and review by the Improvement of Instruction Committee of the questionnaire, the analysis procedures as well as the results offer evidence of objectivity. Finally, the sampling procedure yielded a sample very similar to the population (i.e. all undergraduates in the college) on critical variables (i.e. GPA, major, and grade level). This makes a case for generalizability of results to all undergraduates in the college.

Table 1. Ranking of Academic Advising Needs.

Function Number*	Function	Should be Mean	Should be Rank	Is Mean	Is Rank	Need T-Value	Need Rank
16	Gives info on appeals procedures	2.44	24	1.24	31	15.9	1
25	Discusses options for ed after graduation	2.22	31	1.02	34	15.4	2
42	Gives info on scholarships	2.61	19	1.36	27	15.0	3
24	Discusses job and job search strategies	2.42	25	1.23	32	12.1	4
23	Helps identify career areas to fit me	2.41	26	1.35	28	13.6	5
11	Suggests ways to improve study habits	1.86	35	1.02	35	12.0	6
32	Defines advisor/advisee responsibilities	2.40	27	1.63	24	11.9	7
22	Helps clarify career/life goals	2.12	33	1.30	30	11.9	8
12	Assists with academic difficulties	2.31	29	1.45	26	11.6	9
13	Helps identify my strengths and abilities	2.15	32	1.29	29	11.4	10
17	Assists with selection/changing major	2.30	30	1.47	25	11.2	11
44	Promotes joining student clubs	2.47	23	1.63	23	10.2	12
36	Makes sure we understand each other	2.72	12	2.12	17	10.1	13
43	Refers me to others for help as needed	2.71	14	1.91	21	10.0	14
15	Gives info, advice on academic regulations	2.74	11	2.08	19	9.8	15
27	Accepts feedback as an advisor	2.51	22	1.77	22	9.7	16
19	Discusses content of courses	2.57	12	1.95	20	9.2	17
33	Initiates meetings with me	1.96	34	1.22	33	8.9	18
21	Helps me understand program requirements	2.78	5	2.23	12	8.8	19
41	Is available when I need assistance	2.76	7	2.21	13	8.5	20
29	Encourages independent decision making	2.72	12	2.16	16	8.3	21
45	Willing to provide recommendations for me	2.78	5	2.18	15	8.3	22
39	Seems to enjoy advising	2.75	8	2.25	10	7.9	23
30	Willing to discuss personal concerns	2.54	2	2.38	4	7.6	24
37	Provides caring, open atmosphere	2.67	17	2.22	11	7.4	25
31	Allows time to discuss issues/problems	2.71	14	2.26	9	7.4	26
18	Encourages me to play my academic program	2.62	18	2.10	18	7.2	27
26	Is a good listener	2.75	8	2.31	8	7.1	28
28	Friendly, approachable, sense of humor	2.75	8	2.34	7	6.8	29
34	Is on time for appointments	2.81	3	2.37	5	6.6	30
20	Helps select electives/required courses	2.60	20	2.20	14	6.5	31
38	Provides full attention at our meetings	2.81	3	2.48	2	6.0	32
14	Assists with scheduling/registration	2.69	16	2.36	6	6.0	33
35	Respects my right to make decisions	2.79	4	2.48	2	5.5	34
40	Keeps personal information confidential	2.85	1	2.64	1	3.9	35

PR> T = 0.0001 for all
n = 221
*Function number refers to question number in questionnaire

Advising Needs

Table 1 summarizes the students' perceptions of (1) the importance of each of the 35 advising functions (what should be), (2) the degree to which each function is being fulfilled by college advisors, and (3) the "need" based on the difference between the two mean scores for each function. Need scores are expressed as T-values rather than actual differences. They are considered more accurate since they take into account variation of responses.

All T-values were significant at the 0.0001 level so all functions are considered "needs" — that is there is a real difference between what is and what should be. In examining these results it is important to note that the need scores do not indicate what students consider most important for advisors but rather which functions advisors were least effectively meeting given their importance. Many of the functions appear as low priority needs because advisors are doing a good job in carrying out those functions. For example, the four top ranked "should be" functions and the top three functions currently being met appear among the bottom six functions ranked by need.

In general, advisors could improve their efforts related to helping students select appropriate careers and obtain jobs upon graduation. In addition, managing financially and academically were advising needs ranked high. When items were examined by the seven categories listed earlier and ranked in terms of need the results were as follows:

Rank	Category	Function Numbers
1	Career Development	22-25
2	Academic Needs	11-13
3	Rules and Regulations	14-16
4	General	40-45
5	Course Selection and Majors Info	17-21
6	Counseling	26-30
7	Advising Climate	31-39

The mean scores for males' and females' respective ratings for "should be fulfilled" and "is being fulfilled" were compared using analysis of variance. Six functions were perceived differently by males and females (.05 level) Table 2 summarizes these findings. Females had higher expectations for advisors ("should scores") than males on all six of the significant functions and gave advisors lower "is" scores on half the functions. Females had greater needs (different scores) than males on all six functions suggesting that advisors need to pay special attention to these functions for female advisees.

Table 2. Mean Scores for Males and Females for "Should Be Fulfilled" and "Is Being Fulfilled" Functions that Show Significant Differences

Functions	Means for Males			Means for Females		
	Should	Is	Difference	Should	Is	Difference
11. Suggests ways to improve study habits	1.83	1.26	0.57	1.58	0.86	1.02
22. Clarify career/life goals	1.90	1.29	0.61	2.27	1.31	0.96
23. Identify career areas to fit current skills, abilities and interests	2.24	1.45	0.79	2.53	1.27	1.26
25. Discussion of opportunities for continuation of education after graduation	2.11	1.11	1.00	2.29	0.35	1.34
34. Is on time for appointments	2.70	2.29	0.41	2.54	2.42	0.46
41. Has posted office hours and/or is available when necessary	2.61	2.13	0.48	2.86	2.27	0.59

Student Satisfaction With Academic Advising

To obtain an overall measure of student satisfaction with advising at WSU, students were asked: "How well does the academic advising service at WSU meet your needs?" Students rated this question on a four point scale where 1 = exceptionally well, 2 = adequately, 3 = less than adequately and 4 = poor. A chi-square test was used to determine whether level of satisfaction differed on ten variables: (1) length of time advised by current advisor, (2) frequency of meetings with current advisor, (3) satisfaction with frequency of[1] meetings with advisor, (4) satisfaction with amount of time spent with advisor at each meeting, (5) gender of advisor, (6) class level, (7) whether student had certified a major, (8) whether student was enrolled in an agriculture or a home economics major, (9) gender of student, (10) grade point average of student. The only variable found to be significant at the .05 level was frequency of meetings with advisor. Students' levels of satisfaction were higher for those students who met more often with their advisors. This suggests a need to explore ways of increasing student contact with their advisors.

Conclusions and Recommendations

The academic advising services provided by advisors in the college appear to be very good since advisors are performing the functions which students rate as most important. The need scores suggest that students would like even more help from advisors in securing jobs and scholarships, finding graduate school opportunities, improving study habits and identifying career areas that fit their personal strengths and interests. Career development concerns are especially high for women in the college. These findings support the research of Vener and Krupka (1980) who found that career information was neglected in the advising process. They suggest that universities need to restructure their academic advising to meet the needs of the "new" student who is more vocationally oriented. Specific areas of need identified here are scholarship improvement, career development to enhance employment upon graduation, and funding to subsidize the cost of attending college. Advisors, with the help of the department and/or college, should maintain scholarship and job information and build networks with outside agencies, businesses, and organizations to aid in placing students for internships and permanent employment.

The needs identified in this study support a developmental approach to advising (Bostaph and Moore, 1980). This approach, initiated at the beginning of the student's educational experience, emphasizes long range planning. The academic major, individual courses, and work related programs such as internships are tied together through the long range plan. Once such a foundation is laid, information provided by the advisor becomes meaningful in the context of the student's entire academic program and life goals. Better understanding of the developmental approach to advising by advisors and administrators appears to be one way to better meet the advising needs identified in this study.

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What Motivates Nigerians To Study Technical Agriculture

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In an attempt to increase agricultural production and farm income in Nigeria, the government and institutions of higher learning have been working on the problem of planned agricultural development aimed at revolutionizing agriculture through the introduction of different types of technological innovations (Okuneye, 1985). The main objective of these efforts is to raise the standard of living of subsistence farmers (Atala, 1984).

At the same time, Atala (1984) indicated that a variety of factors have inhibited widespread adoption of recommended agricultural innovations. These included educational, economic, political, sociological and sociopsychological factors. However, the lack of

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