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# Use of and satisfaction with two types of advising systems among engineering students at Iowa State University

William Francis Jaffe  
*Iowa State University*

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**Use of and satisfaction with two types of advising systems  
among engineering students at Iowa State University**

**Jaffe, William Frances, Ph.D.**

**Iowa State University, 1989**

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Use of and satisfaction with two types of  
advising systems among engineering students  
at Iowa State University

by

William Francis Jaffe

A Dissertation Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

Department: Professional Studies in Education  
Major: Education (Higher Education)

**Approved:**

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**For the Graduate College**

Iowa State University  
Ames, Iowa

1989

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## INTRODUCTION

Academic advising has the potential to be one of the more vital activities in Higher Education during the next decade. As institutions of higher education begin to face the problems produced by declining enrollments, academic advising may be a tool to assist in reduction of student attrition (Durio & Kildrow, 1980; Greenfield, Holloway & Remus, 1981; Hines, 1981; Jackson, 1978; Landis, 1976; Morehead & Johnson, 1964; Rybak, 1985; Smith, 1982).

Retention has become, in the view of researchers, a survival issue for Higher Education. It has been shown to be closely tied to the quality of academic advising (Trombley & Holmes, 1981) with retention improvement rates reported of up to 25% in institutions which improved academic advising programs (Carstensen & Silberhorn, 1979). The most important positive influence upon retention, researchers report, is a caring attitude on the part of the institution's faculty and staff (P. Wood and J. Wood, 1979). This attitude translated into action can result in a desire to assist students in coping with the challenges of higher education, helping students plan realistic strategies for achieving success, and stimulating a positive and personalized relationship between faculty and student (Baer & Carr, 1985; Kapraun & Coldren, 1982).

Quality advising can lead to significant outcomes for students. These include better choice in major and a smoother transition into the post-baccalaureate environment (Habely, 1986). Habely identified academic advising as supporting student learning. It may also improve the

environment of the institution by contributing to the formation of closer relationships between students, faculty and staff (Kramer, 1983). Advising might be a key in assisting the student to acquire the tools for continued intellectual growth (Borgard, 1981). Many students, Cameron (1952) observed, expressed the desire to have a stronger bond between themselves and the faculty and staff of the college or university. Students wanted more, not less assistance from their academic advisors, and a friendly, personal relationship.

Factors that contribute to student satisfaction with the advising system include advisor availability and the knowledge of the advisor regarding university policies and procedures (Grites, 1981; Kozloff, 1985). Providing career assistance and job placement information, and overall interpersonal skills of the advisor are other factors reported to contribute to advising satisfaction (Hornbuckle, Mahoney & Borgard, 1979). Student advising satisfaction is also reported when the faculty advisor provides personal counseling to the student (Duncan, 1972; Hardy, 1976).

There appears to be a divergence of opinion about the appropriate role of the academic advisor. Researchers in the area of academic advising see many roles for the advisor ranging from one who is task oriented (F. B. Dressel, 1974), to one concerned with meeting institution and student goals (Crockett, 1978), to one who can become a faculty friend (Murry, 1971). Ender and Winston (1982) incorporated the thinking of these researchers and others in their formulation of the following possible roles for the advisor:

- 1) Instructor: An advisor who assists in the formulation of students' intellectual and educational goals and helps in selecting courses consistent with these goals and objectives.
- 2) Growth facilitator: Advisor acts as a problem solver, in the student's personal life as well as academic life.
- 3) Resource person: Advisor aids in student information search acting as a resource person for campus and community sources.
- 4) Friend: Advisor is a caring individual, establishing a trusting relationship with student.

To determine which role is most successful, in terms of providing the desired benefits, it is necessary to study systematically systems in which the advisor/advisee interaction takes place. An understanding of the different types of systems being utilized in institutions of higher education will aid in addressing these inquires.

Different types of advising systems are being utilized in institutions of higher education, some which have roots in the early colonial colleges (Hines, 1984). Today's system of advising evolved in the earlier part of the twentieth century. Advisors not only helped in the planning of a student's program of study, but also assisted in problems of poor scholarship and preparation for comprehensive exams (Brubacher & Rudy, 1976). Advisors often assisted students with financial help, health supervision, and basic work in keeping personnel records, including reports to parents and summaries of procedures involving students (Hardee, 1959). Academic advising, as a function supported and administered by the institution, is a product of the 1960s and 70s (Hines, 1984). The

two advising systems which are the primary types utilized in the 1980s to provide academic advising are faculty-based and professional advisor-based. They continue the traditional tasks of the advisor. In both systems the purpose is to provide students with decision-making assistance in the pursuit of their academic goals. A majority of colleges and universities utilize faculty as the primary provider of academic advising (Cook, 1980), and professional advisor-based advising is the type of advising system next often utilized (Moore, 1976). Peer advising is also utilized in many colleges and universities but as a support system for one of the two aforementioned systems. Peer advisors support faculty advisors in procedural responsibilities of advising. They serve as 'big brothers' or 'big sisters' and assist in early identification of students needing in-depth academic assistance. Their involvement may also enhance the academic socialization of students (Kapraun & Coldren, 1982).

Researchers are divided on the issue of which type of system provides the best advising to students. Burke (1981) pointed out that faculty possess the technical knowledge concerning university policies and procedures, have the ability to tender information on career and professional opportunities, and are able to provide students with academic advice and suggestions for scholastic improvement.

Though faculty advising is the most frequently used delivery system for academic advising services in colleges and universities (Crockett, 1985), some researchers believe that students assigned faculty advisors are not as satisfied with the advising received from their advisor as compared to the satisfaction reported by students who are assigned

professional advisors. In a study comparing the two types of academic advising systems, Habely (1978) reported that students advised by professional advisors provided significantly higher satisfaction ratings than students advised by faculty advisors. Other researchers reported that the benefits attributable to advising by professional advisors, when compared to advising by faculty, include decreased time needed to graduate, fewer last-minute graduation clearances, faster and more efficient registration scheduling, and increased student use of their advisors. Figure 1 illustrates the comparative advantages and disadvantages of the two types of academic advising systems. From the point of view of this researcher, the many disadvantages of a faculty based advising system suggests the superiority of a professional advisor based system.

Research is limited on the relationship between student characteristics and satisfaction with academic advising. Rossman (1967, 1968) found that a student characteristic which was a factor in student reported advising usage and satisfaction was the gender of the student. Women assigned a faculty advisor were more likely to seek assistance from their advisor and reported higher satisfaction than male students.

Research on retention of men and women engineering students revealed greater attrition among women, but advising was reported as having no apparent effect in the decision of the student to withdraw (Durio & Kildow, 1980; Whigham, 1988).

The student characteristic grade point average has been the focal point of a study on retention. Students advised by release-time faculty earned higher grade point averages than students advised by faculty

Faculty-basedProfessional advisor-based

## Advantages

- |  |  |
|--|--|
| 1) Cost Effectiveness<br>(Holmes, Clarke & Irvine, 1983)                     | 1) Selection as advisor based<br>on ability, skill                               |
| 2) Expertise in discipline<br>(Rybak, 1985)                                  | 2) Student-centered approach<br>(Crockett, 1985)                                 |
| 3) Knowledge of specific academic<br>requirements (Hallberg, 1964)           | 3) Availability to students<br>(Spenser, Peterson & Kramer,<br>1982)             |
| 4) Expanded student/teacher<br>relationship (Hardee, 1961;<br>Passons, 1964) | 4) Knowledge of current<br>university requirements/<br>policies (Crockett, 1985) |

## Disadvantages

- |   |   |
|---|---|
| 1) Busy schedules of faculty<br>(Chathaparampil, 1970;<br>Wankat, 1986)         | 1) High cost of operation<br>(Seeger & McLean, 1985)                              |
| 2) Lack of advising ability for<br>some faculty (Behrens, 1966;<br>Walsh, 1979) | 2) Potential to lessen student/<br>faculty contact (Crockett,<br>1985)            |
| 3) Lack of advising training<br>(Trombley & Holmes, 1981)                       | 3) Lack of specific career<br>knowledge or experience<br>(Guinn & Mitchell, 1986) |
| 4) Lack commitment (Robertson,<br>1958)   |   |
| 5) Little support or rewards<br>(Cook, 1980)                                    |   |
| 6) Lack career information outside<br>of discipline (Kozloff, 1985)             |   |

Figure 1. Advantages and disadvantages of two types of advising systems.

without release time (Morehead & Johnson, 1964).

A study investigating the relationship between student age and use of and satisfaction with the academic advisor (Kasworm, 1980) found no significant association of age and either student use of or satisfaction with advising services (i.e., job placement service, personal and career counseling). However, later studies have led researchers to state that advisors must allow more time and be more sensitive to older, nontraditional students (Grites, 1982; Sauders & Erving, 1984). As of this investigation, relationships among student grade point average, age, gender and use of advisor and satisfaction with advising have not been fully investigated.

#### Need for Study

A survey of academic advising literature by McLaughlin and Starr (1982) revealed that research on academic advising was not addressing the relationship of student characteristics to advising effectiveness. Studies are needed to ascertain the type of academic advising system which provides the greatest degree of satisfaction to students, to identify the components of academic advising associated with student satisfaction, and to examine the relationship between student characteristics and satisfaction with academic advising.

#### Statement of Problem

Several problems will be addressed in this investigation. It will identify the type of academic advising system (faculty-based versus professional advisor-based) most frequently used when students seek specific



advising assistance. Also identified will be the degree of advising satisfaction students report experiencing with each system, the relationship between student characteristics and academic advising satisfaction and the role of the academic advisor as perceived by the student.

#### Statement of Purpose

This is a study of the undergraduate academic advising program in the College of Engineering at Iowa State University. The purpose of the study is to:

- 1) Determine the role of the academic advisor as perceived by the student.
- 2) Identify whether there is greater frequency of utilization of the academic advisor among students assigned to faculty advisors or among those assigned to professional advisors for the following specific advising needs:
  - a) Preregistration assistance,
  - b) Class add/drop assistance,
  - c) Curriculum planning assistance,
  - d) Career guidance assistance,
  - e) College rules and procedures assistance,
  - f) Department rules and procedures assistance, and
  - g) Personal counseling assistance.
- 3) Identify whether there is greater reported satisfaction with advising received from the assigned advisor among students assigned to faculty advisors or among those

assigned to professional advisors for the specific advising needs stated above.

- 4) Identify the student characteristics associated with utilization of and satisfaction with one of the two types of assigned academic advisor.

The first purpose of this study will be identified by collection and interpretation of descriptive data. The last three purposes of the current study will be investigated by use of research and statistical hypotheses.

#### Identification of Variables Utilized in Study

There are four independent variables in the study. These are:

- 1) Type of assigned advisor
  - a) Faculty
  - b) Professional advisor
- 2) Grade point average of undergraduate student
  - a) Grade point average of 3.2 to 4.0
  - b) Grade point average of 2.8 to 3.19
  - c) Grade point average of 2.0 to 2.79
- 3) Age of undergraduate student
  - a) Less than 25 years of age
  - b) Equal to or greater than 25 years of age
- 4) Gender of undergraduate student
  - a) Male
  - b) Female

The independent variables chosen for this study are those variables that the researchers describe as having the potential to impact on the student use of and satisfaction with academic advising (Durio & Kildrow, 1980; Grites, 1982; Kasworm, 1980; Morehead & Johnson, 1964; Rossman, 1967).

There are 14 dependent variables in this study. These are:

- 1) Use of advising for:
  - a) Preregistration assistance,
  - b) Class Add/Drop assistance,
  - c) Curriculum Planning assistance,
  - d) Career Guidance assistance,
  - e) College Rules and Procedures assistance,
  - f) Department Rules and Procedures assistance, and
  - g) Personal Counseling assistance.
- 2) Satisfaction with advising received for the same seven specific advising needs.

The dependent variables chosen for this study are the types of assistance which students in other studies have identified as seeking from the academic advisor (Bossenmaier, 1978; Carstensen & Silberhorn, 1979; Chathaparampil, 1970; Dressel, 1974; Hardee, 1970; Kozloff, 1985; Stickle, 1982; White, 1969).

#### Research Hypotheses

Hypothesis 1a: For the seven dependent variables addressing usage, it is hypothesized that students assigned to a professional advisor will exhibit greater use of their advisor than students assigned to a faculty

advisor for specific advising needs.

Hypothesis 1b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that students assigned to a professional advisor will exhibit greater satisfaction with their advisor than students assigned to a faculty advisor for specific advising needs.

Hypothesis 2a: For the seven dependent variables addressing usage, it is hypothesized that students with higher grade point averages will exhibit greater use of their advisor than students with lower grade point averages for specific advising needs.

Hypothesis 2b: For the seven dependent variables addressing usage, it is hypothesized that students with a higher grade point average assigned to a professional advisor will exhibit greater use of their advisor than students with a higher grade point average assigned to a faculty advisor for specific advising needs. Students with lower grade point averages who are assigned to a professional advisor will exhibit greater use of their advisor than students with lower grade point averages who are assigned to a faculty advisor for specific advising needs.

Hypothesis 3a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that students with a higher grade point average will exhibit greater satisfaction with their advisor than students with a lower grade point average for specific advising needs.

Hypothesis 3b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor, it is

hypothesized that students with a high grade point average who are assigned to a professional advisor will exhibit greater satisfaction with their advisor than students with a high grade point average who are assigned a faculty advisor for specific advising needs.

Hypothesis 4a: For the seven dependent variables addressing usage, it is hypothesized that students who are 25 years of age or older will exhibit greater use of their advisor than students who are less than 25 years of age for specific advising needs.

Hypothesis 4b: For the seven dependent variables addressing usage, it is hypothesized that students who are 25 year of age or greater and are assigned to a professional advisor will exhibit greater use of their advisor than students who are less than 25 years of age and assigned to a faculty advisor for specific advising needs.

Hypothesis 5a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that students who are 25 years of age or older will exhibit greater satisfaction with their advisor than students who are less than 25 years of age for specific advising needs.

Hypothesis 5b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor, it is hypothesized that students who are 25 years of age or greater and are assigned to a professional advisor will exhibit greater satisfaction with their advisor than students who are less than 25 years of age and are assigned a faculty advisor for specific advising needs.

Hypothesis 6a: For the seven dependent variables addressing usage,

it is hypothesized that female students will exhibit greater use of their advisor than male students for specific advising needs.

Hypothesis 6b: For the seven dependent variables addressing usage, it is hypothesized that female students assigned to a professional advisor will exhibit greater use of their advisor than male students assigned to a faculty advisor for specific advising needs.

Hypothesis 7a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that female students will exhibit greater satisfaction with their advisor than male students for specific advising needs.

Hypothesis 7b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor, it is hypothesized that female students assigned to a professional advisor will exhibit greater satisfaction with their advisor than male students assigned to a faculty advisor for specific advising needs.

#### Definitions

In order to clarify the meanings of various terms used in this study, the following definitions are given:

Academic advising: Grites (1979) defined academic advising as a decision making process during which students realize their maximum educational potential through communication and information exchange with an advisor.

Academic advising system: Describing the type of personnel utilized to provide undergraduate academic advising. In this study the two types referred to are:

- 1) Faculty-based academic advising system: The utilization of teaching faculty to provide academic advising. Faculty are individuals who are engaged in undergraduate teaching in the same discipline as the students they advise. In this study faculty advisors are utilized in all major areas of study but electrical engineering (i.e., aerospace engineering, agricultural engineering, material science engineering, chemical engineering, civil, construction and surveying engineering, engineering science, industrial engineering, mechanical engineering, and nuclear engineering).
- 2) Professional advisor-based academic advising system: The utilization of professional advisors to provide academic advising. Professional advisors are individuals who have their training in an area of expertise not pertaining to the field of study of the student they advise. Professional advisors may hold faculty rank but are not teaching faculty. In this study all professional advisors have their training in an engineering field, not in the area of student services. All undergraduates whose major area of study is electrical engineering are advised by professional advisors.

### Significance of Study

This is a study of the undergraduate academic advising program in the College of Engineering at Iowa State University. This study will attempt to indicate the type of academic advising system with which students report the highest degree of satisfaction. This study should allow the College of Engineering to evaluate the current system of advising and help facilitate change to better serve the needs of its students. Questions that could be addressed by the College as a result of this study are:

- 1) Should all Engineering departments utilize the same type of advising system?
- 2) Should student characteristics as student major, grade point average, age, and gender be determining factors in assigning students an advisor?

The current investigation can serve as a model for similar institutions of higher education to compare their academic advising systems and seek ways to improve.

### Limitations of Study

This study utilized a pre-existing data set generated from a questionnaire that was created by the Survey and Evaluation Subcommittee of the Engineering Education Projects Committee in the College of Engineering at Iowa State University. In addition, all professional advisors in the study were assigned to one department in the college, a department which utilized no faculty advisors. Furthermore, the number of



professional advisors was small (fewer than five), whereas over 98 faculty advisors were represented in the study. Also, the student to advisor ratio ranges from a low of 10 students for faculty advisors to a high of 200 for professional advisors. Results and conclusions may be difficult to extrapolate to other settings or populations of students. Finally, the subjects represent students who are completing their undergraduate studies in engineering. A study of lower-division students or those who do not complete a degree may yield results which are not completely comparable.

## REVIEW OF LITERATURE

### Introduction

In this chapter, studies of academic advising are summarized in the following areas: the role of the advisor, the type of academic advising systems utilized, and student satisfaction with academic advising.

### Role of the Advisor

Identifying what the advisor's role should be in the advising process is discussed in the literature. The role of the advisor is to facilitate the integration of students' academic goals with their personal, social and career goals. Advisement involves both students' internal development as well as students' social development (Walsh, 1979). In the role model of the academic advisor, proposed by F. B. Dressel (1974), the advisor should:

- 1) read and interpret requirements of the institution and the student's major leading up to graduation.
- 2) assist in determining proper courses for the student to meet requirements.
- 3) keep an accurate student academic record.
- 4) be able to transmit information to the student concerning non-resident courses and graduate school.

The role of the academic advisor is viewed by some researchers as being multi-faceted. One dimension of this is an advisor who can be viewed by the student as a confidant and possibly a friend. In this role, the duties of the advisor include not only the tasks outlined

earlier, but an emphasis on the personal relationship. The advisor should be warm, friendly and know the student as an individual. The advisor is easily accessible to the student, has confidence in the student, has regular meetings with the student, and develops an atmosphere in which the student feels comfortable to discuss problems and difficulties, both academic and personal (Murry, 1971).

The academic advisor, as guardian of the student's academic well-being (Hardee, 1970), is another role of the advisor. This includes:

- 1) Discussing the program of general education and its relationship to the declaration of a college major.
- 2) Planning a schedule with consideration of both immediate and long-range objectives in mind.
- 3) Assisting the student in exploring his major field by interpreting printed information and referral to other information sources.
- 4) Serving as coordinator of the educational experiences of the student.
- 5) Demonstrating personal interest in the student's education.

The advisor's role can be defined in terms of specific outcomes (Crockett, 1978). These can include helping students understand the nature and purpose of their post-secondary education; aid in planning an educational program which is consistent with student abilities and interests, and integrating the resources of the institution in meeting the student's objectives and educational goals. The advisor also assists the student in understanding institution requirements and evaluating

the student's progress.

Academic advising and its relationship in the retention of minority students in engineering programs was discussed by Landis (1976). He stated academic advising can help insure students are placed in classes with conscientious and student-oriented teachers. Academic advisors can help in finding tutors, monitoring student progress, providing an outlet for personal counseling, aiding in career development, and working to create a positive, success-oriented environment for the minority student. This may lead to student satisfaction and student academic success.

The literature review revealed that many studies utilized surveys as the primary method for obtaining information regarding advising systems. Surveys generally elicited responses from either advisors and/or advising administrators, or students. Carstensen and Silberhorn (1979), in a survey of administrators responsible for academic advising, queried their responding institutions. The important advising functions respondents ranked were identical for the two-year, four-year public, and four-year private colleges and universities. In order of priority, they found advisors should:

- 1) provide assistance in course selection and class scheduling.
- 2) provide academic regulation and registration information.
- 3) assist students in developing career plans.
- 4) assist students in exploration of life goals.
- 5) provide personal counseling.

Faculty most often list knowledge of the curriculum and university policies and procedures as being very important in providing quality

advising. Listening skills, a friendly manner and other interpersonal relationship skills are also cited as important, but less so than knowledge factors. When asked to rate these skills, faculty tend to be more confident in their ability to communicate on the interpersonal level and less confident in their knowledge of curriculum and university policies (Bossenmaier, 1978).

Identifying the academic advising functions important to students was the goal of a study at the University of Northern Colorado (Kozloff, 1985). It included 147 students (77% were lower division students) who were asked to indicate which advising functions were most important. The results indicated students felt the majority of advisors were keeping regularly scheduled hours and were giving adequate time for advising. However, students were not as satisfied with their advisor's ability to give information about careers or opportunities such as internships and scholarships. The study was intended to determine student preferences of personnel doing advising services. Curricular advising functions were reported as being the most important function of academic advising.

Students responded that the advisor should provide information on degree requirements, course selection, course content, and selecting major. Of equal importance were dispensing information and assistance in career advising. Lower priority was given to functions including help with study skills, discussing personal values, help with personal problems, and getting to know their advisor. Students were asked to identify the source they would most use when seeking specific advising assistance. The study reported faculty advisors were preferred when

seeking assistance with course selection, information on majors or minors, assistance in graduation check, and help in selecting elective courses. Professional advising staff were identified as the preferred advising source when seeking information on employment opportunities and assistance in preparation for professional school. Students did not identify a preference between faculty or professional advisors when seeking information about graduate school, scholarships, and assistance in grade negotiating. Peer advisors were selected as a source for advising assistance when student sought help with personal problems and information on extra-curricular activities. Students reported no specific preference when seeking assistance for information about part-time employment, University academic policies, academic appeals, and help with academic problems. No preference was also indicated when students sought an advisor to discuss their study skills and intellectual interests and abilities.

Through use of a survey of 540 faculty and 649 undergraduate students from four midwestern universities, Larsen and Brown (1983a) found that:

- 1) 61% of the students and 78% of the faculty agreed an academic advisor should be expected to assist in solving student personal problems.
- 2) 73% of the students and 70% of the faculty agreed an academic advisor should be expected to refer students to the sources of the student's discipline.
- 3) 87% of the students and 79% of the faculty agreed an academic advisor should be expected to answer questions about financial aid.

Faculty and student perceptions of academic advising functions were measured by Burke (1981). He reported students stated they perceived the role of the advisor was to inform students of employment opportunities in the field. Advisors should assist students with career and vocational planning, provide academic advice and suggestions for scholastic improvement. Advisors should also explain university regulations and requirements, assist in selecting a major, and refer the student to sources of financial assistance.

Faculty perceived their advisor role in terms of helping students find ways to make college more interesting and intellectually stimulating. Faculty respondents stated advisors should provide students with academic advice and suggestions for scholastic improvement, inform students of employment opportunities in the field, and help students explore graduate or preprofessional sources. Faculty advisors should assist in planning an academic program of study and assist in the student selecting a major. Faculty recognize the importance of providing technical assistance but also feel they should provide intellectual stimulation and academic help.

Studying the role of the advisor, Guinn and Mitchell (1986) included students as well as faculty and administrators. The three groups were in agreement that the role of the advisor should include providing assistance in course selection and academic regulation and registration information. In discussing the task of defining the role of the advisor, they observed that utilizing the perceptions of the student to help formulate the advisor role is difficult because students cannot agree on what the role should be. Over half of the three groups polled in the study

indicated the advisor should not have the responsibility to counsel about personal concerns. Conversely, nearly 42 percent of the students, 45 percent of the faculty, and 34 percent of the administrators indicated advisors having some role in the matter of personal counseling. When students were asked if helping them explore their life goals was an advising function, half of the students answered in the positive and the other half felt it was not an advising function. The confusion about the role of the advisor could be the results of the student's transformation from high school to college (Hallberg, 1964). He stated going from an over-protective high school counselor to a faculty advisor at a university was often a difficult transition for the student.

### Summary

The only area where there seems to be some consensus on the role of the advisor is in assisting the student in acquiring information on registration, course selection, and other university policies. In other areas of advising, especially career advisement and personal counseling, there is little agreement as to the role of the advisor. The apparent discrepancy in what the role of the advisor should be was addressed by Guinn and Mitchell (1986). They stated the local institution is the best place to come to a consensus of what the advising role should be. They caution that every educational family is unique; therefore, the advisor's responsibilities, although general in scope, need to reflect that uniqueness appropriate to the institution which the advisor serves.



### Academic Advising Systems

Many recent studies have addressed the issue of the type of delivery systems being utilized at centers of higher education (Carstensen and Silberhorn, 1979; Cook, 1980; Habely, 1978; Kiell, 1957; Moore, 1976; Sheffield & Meskill, 1972; Tiede, 1976; White, 1969). This part of the review of literature will discuss the different types of academic advising systems utilized.

#### Utilization of advisor type

Successful advising programs use a combination of delivery systems to insure that students are provided with several options in obtaining advising services (Crockett, 1985). Crockett identified five types of delivery methods of academic advising. These are utilizing faculty, professional advisors, paraprofessional advisors, peer advisors, and advisement centers. He believed that faculty advisors were the most efficient means of providing advising services. Faculty can utilize their expertise in the discipline and knowledge about educational and career opportunities to benefit the student advisee. Professional advisors are viewed as free of academic department biases but may be more interested in psychological counseling than advising. Also, heavy time commitment and advisee load may make it difficult to be effective.

Paraprofessional and peer advisors can help alleviate work load and time burden of professional staff. Often though, they do not possess background, depth and experience necessary to deliver a full range of advising services. Advisement centers have well-trained professional

advisors, a central location on campus and are student centered rather than department centered. Their major drawback is the cost. Academic advising centers have tended to concentrate on advising new students and those who have not declared a major. Faculty advising is the traditional mode in higher education and faculty remain the largest group of advisors. Full-time professional advisors, though, are a means by which advising services are structured (Hines, 1984). Hines recommended developing a delivery system for advising utilizing faculty and professional advisors.

A study of over 200 baccalaureate degree granting institutions (Cook, 1980) identified the following facts about academic advising systems:

- 1) Faculty were involved in advisement at 89% of the responding institutions.
- 2) Forty-eight percent of the responding institutions had faculty advising only.
- 3) Forty-one percent of the responding institutions had a combination of faculty and paraprofessionals.

Research involving the 12 state-supported universities in Illinois identified faculty as being utilized to advise department majors at 35 percent of the responding institutions, professional advisors served as academic advisors in 28 percent of the institutions, and six percent of the responding schools supplemented their regular advisors with peer advisors (Moore, 1976).

The similarities and differences of advising systems in 164 universities and colleges having a program in chemical engineering indicated

schools with an enrollment above 350 students were most likely to utilize professional advisors, whereas schools with 250-350 students were most likely to use faculty as academic advisors (Wankat, 1986). Faculty respondents viewed their advising role as providing information and advice concerning chemical engineering and college academic matters. Advisors did not see their role as providing personal counseling. Faculty advisors reported they became better acquainted with students through classroom interaction than through advising. Several faculty respondents observed the quality of advising is uneven and is dependent on an advisee's attitude and skills. Respondents stated advisor training helped increase the quality of faculty advising, and personal involvement and rapport with students was important in determining a quality advising program.

Students responded that some professors were not interested in them, or seemed too busy to give them time or attention. Students also responded that they wanted personal counseling from their faculty advisors. Students with professional advisors reported satisfaction with the advising received, but missed the contact with faculty. Students also wanted more help with career decisions and decisions concerning graduate school.

#### The professional advisor as academic advisor

A key benefit associated with the use of professional advisors as academic advisors seems to be the degree of training and expertise they bring to the job of advising (Seeger & McLean, 1985; Spencer, Peterson & Kramer, 1982).

A professional advisor-based type of academic advising system may be economical and might result in a more coordinated program of advising than a faculty-based program (Dameron & Wolf, 1974). Dameron and Wolf stated the degree of training and expertise necessary to be a quality academic advisor is present more in professional advisors than in faculty members. This is primarily due to faculty training and expertise which is specific to their discipline. Dameron and Wolf proposed a five step sequential advising model utilizing professional advisors.

Steps in the model included:

- 1) Exploration of life goals, facilitated by a professional counselor.
- 2) Exploration of vocational goals, facilitated by the professional counselor.
- 3) Selection of program, facilitated by a guidance associate (a graduate student working on an advance degree in a student personnel area).
- 4) Selection of courses, facilitated by a guidance associate.
- 5) Scheduling of courses, facilitated by a paraprofessional assistant; an undergraduate, upper division student.

In a study at Illinois State University, Habely (1978) sought to determine differences in student satisfaction with academic advisement conducted by student, faculty and advisement center academic advisors. Habely found advising systems utilizing professional advisors or peer advising to be somewhat more effective than a faculty-based advising system.

Robertson (1958) stated an advising system utilizing professional advisors would allow the faculty to better serve the student. By utilizing professionals trained to handle special problems, faculty would be free to assist students with problems requiring their experience and knowledge of their discipline.

Limitations of utilizing professional advisors include a lack of specific knowledge about the career and technical aspects of the students chosen field (Guinn & Mitchell, 1986), and possibility of less contact between teaching faculty and students (Seeger & McLean, 1985).

#### The faculty as academic advisor

A majority of the research and literature reviewed supported the faculty member as the best person to facilitate the advising program (Cook, 1980; Hardee, 1961; Holmes, Clarke, & Irvine, 1983; McAnulty, O'Connor & Sklare, 1984; Morehead & Johnson, 1964; Passons, 1971; Rybak, 1985).

A national survey of 820 two-year, four-year public and four-year private colleges and universities indicated general support for faculty as the main deliver of academic advising services (Carstensen & Silberhorn, 1979). The report stated:

Faculty advisors were utilized as the primary delivery system for advising services in 58% of two-year, 82% of four-year public and 89% of four-year private institutions. Professional advisors were utilized as the primary delivery system for advising services in 35% of two-year institutions. Less than two percent of responding public and private

four-year institutions utilize professional advisors as the primary delivery system of academic advising. Peer advisors were utilized as a support system to the primary system in 25% of two-year, 41% of four-year public, and 31% of four-year private institutions. Professional advisors were utilized as a support system to the primary system in 53% of two-year, 60% of four-year public, and 54% of four-year private institutions (p. 4).

Holmes, Clarke, and Irvine (1983) supported advising by faculty based on philosophical and practical reasons. Philosophically, faculty have the knowledge specific to their discipline, a necessary trait for an advisor to possess. A University of Louisville study of faculty (McAnulty, O'Connor, & Sklare, 1984) reported:

- 1) 89.3% believed faculty should be involved in advising students.
- 2) 91.6% believed students should be assigned to specific advisors.
- 3) 83.3% believed the one-to-one method of advising was the best to use.

Academic advising is viewed as a teaching function by some scholars. It is an opportunity for faculty to help students reach their maximum educational potential. This can be achieved through communication and information exchange between the faculty advisor and student (Hines, 1981).

The literature on academic advising distinguishes the difference between teaching and advising. Teaching is a process in which instructors set the goals to be achieved. In teaching, instructors inject their personality in the teaching forum, and the subject taught is one external

to the student. In advising, the subject is the student, and it is the student's goals and objectives the advisor attempts to help the student meet (Mayhew, 1972).

Addressing the whole spectrum of an instructor's involvement with his or her student, Parsons (1971) envisioned advising as an avenue to expand on the existing teacher-student bond. He commented advising provided an opportunity to capitalize on the potentials of the instructor-student relationship. The faculty member as academic advisor and the impact on student retention were discussed by Rybak (1985). He viewed the faculty advisor as a critical part in the retention effort of freshmen engineering students. A faculty member as the academic advisor for freshmen was viewed as best because it established a link between the student and a member of the student's chosen field. Rybak recommended this relationship should be strengthened by requiring the freshman student to take one course taught by their academic advisor. He also believed the advisor should initiate discussions with students and make sure students are enrolled in courses where the instructor is concerned about the student's welfare.

Hardee (1961) addressed the advising function as complementing the teacher's role. He believed advising to be in harmony with the teacher's task of stimulating the student to learn. The faculty member through advising could motivate the student to find answers and insights.

Academic advising, observed Hallberg (1964), is a task which requires an expertness and specificity only teaching faculty, can provide, particularly when student enters his major field. Faculty are the best choice

for academic advisors because of knowledge of the academic curriculum and expertise in one-to-one situations with students. Students also prefer the interaction which faculty advising provides (F. B. Dressel, 1974). Kramer (1983) viewed faculty-based advising as providing benefits to the faculty as well as the student. He believed a healthy advising program could serve as a useful mechanism for faculty development.

Limitations of the faculty-based advising system include students indicating faculty members do not have either enough time or enthusiasm for advising (Chathaparampil, 1970). Another commonly mentioned problem is the general feeling that students do not know the faculty member well enough to talk to him/her freely (Donk & Oetting, 1968).

Advising, Walsh (1979) stated, was not identical to teaching. He believed not all faculty were capable of advising. Students should only be assigned to those faculty who are personally and educationally qualified to advise (Behrens, 1966). Other researchers stated that academic advising is not a task to be required of every faculty member. When a faculty advisor who is not interested in advising or who believes his/her time too valuable to be allotted to this activity, the student suffers (P. L. Dressel, 1976). Faculty may be a major obstacle to quality advising reported Trombley and Holmes (1981). They believed the majority of faculty do not possess the necessary range of skills and knowledge to be excellent advisors. Faculty do not have easily available opportunities to develop these capabilities and often do not have motivation to change.



### Summary

The studies in the review revealed faculty are utilized as the primary deliver of academic advising, though there is support for the professional advisor. All of the aforementioned types of advising systems have their benefits and limitations. There does not seem to be a consensus as to which type is most preferred. The idea of uniqueness being a positive feature of an advisement program was expressed in the literature reviewed. In order for an academic advising program to have lasting impact, it needs to grow from the special needs prevalent on each college or university campus (Guinn & Mitchell, 1986). Though an advising program will share common principles and problems with others, it will of necessity be unique in extent, structure, and emphasis (Robertson, 1958).

What is needed is a look at how satisfied the student is with advising, whether provided by professional advisor, faculty member, or peer advisor. The literature has many studies on satisfaction of advising.

#### Satisfaction with the Advising System

This section of the review of literature will examine studies that have discussed student satisfaction with academic advising. It will include identifying factors which students report contribute to satisfaction with an advising system, identifying student characteristics that contribute to advising satisfaction, and examining the faculty perception of student satisfaction with an advising system versus the student reported satisfaction.

### Student reported advising satisfaction factors

An advising system study at Miami University (Cameron, 1952) reported the items of greatest satisfaction to students were receiving grades personally from their advisors, obtaining the advisor's view on what elective courses to take, receiving from their advisor a clear picture of graduation requirements, and organizing an educational program with the advisor to meet vocational objectives. This and other early studies identified factors students reported were important in achieving satisfaction with their advisor and the advising system.

White (1969) studied student's attitudes toward advisement by need for advisement, characteristics of advisor, the state of the advisor-advisee interpersonal relationship, and student advisement needs. Three predominant factors were identified in the area of interpersonal relationship which contributed toward student advising satisfaction. White identified these as atmosphere, rapport and empathy. Service to students, advisor rapport, technical help provided by the advisor, and assistance with personal problems were the student satisfaction variables identified by Chathaparampil (1970). Specific variables in each area are:

#### Service to students:

- 1) Availability of the advisor
- 2) Speed with which advisor acted on their behalf
- 3) Convenience of location of advisor's office

#### Rapport:

- 1) Informal nature of advising

- 2) Similarities in the academic interest and life style of themselves and the advisor
- 3) Concern of advisor for them as students
- 4) Advisors informal knowledge of instructors

Technical help:

- 1) Selection of a particular course or section of a course
- 2) Ability to communicate to student
- 3) Help rendered to improve grade point average
- 4) Assistance to student to understand structure of course

Personal Problems:

- 1) Personal concern shown by advisor in counseling them
- 2) Professional training of advisor
- 3) Attitude of advisor toward student's personal problems
- 4) Advisor's knowledge or resources and referrals in academic community.
- 5) View on education without restriction to major field

The interpersonal dimension of the advisor was identified as a primary contributing factor toward student perceived advisor success (Hornbuckle, Mahoney & Borgard, 1979). Interpersonal skills also have been found to be instrumental in contributing to success of the student (Bossmailer, 1978; Kramer, 1982). Style of the advisor, Tiede (1976) observed, appeared to have a greater impact on satisfaction of the advisor than did the content of the advisement.

The simple reporting of student feelings of satisfaction or dissatisfaction is believed by some researchers to be relatively poor criteria

in evaluating an advising system (Cameron, 1952). Cameron believed concentrating on responses indicating which advising services were provided to help meet the student's goals or objectives was more significant. The degree of student satisfaction with specific services was a valuable measure of the effectiveness of an advising program.

The relationship between satisfaction and effectiveness of academic advisors as perceived by the advisee was studied by Dautch (1972). He reported statistically significant differences between the student perception of advising satisfaction and the student perception of advising effectiveness. Advising satisfaction is defined as the perceived quality of the advisor-advisee interpersonal relationship. Advising effectiveness referred to the knowledge aspects or the ability of the advisor to competently disseminate information in the advisement association.

Compulsory advising and the effect on student advising satisfaction was studied by Levine and Weingart (1973). They reported compulsory advising did help advisors monitor the progress of students and prevent some students from incurring mistakes, but this type of system transforms advising into a routinized administrative structure and does not promote greater student-faculty contact.

The authors of a study at Brigham Young University (Spencer, Peterson & Kramer, 1982) discussed factors which resulted in student dissatisfaction with academic advising. The researchers reported:

- 1) 31% of the students did not know their faculty advisor,
- 2) 66% had not even attempted to see their advisor during the previous semester,

- 3) 57% claimed to have taken wrong classes because of incorrect advising from faculty,
- 4) 70% recommended centralized advising centers in each college, and
- 5) 61% reported dissatisfaction with academic advising.

Student dissatisfaction was reported to stem from the following:

- 1) faculty were not available,
- 2) faculty did not keep current on graduation requirements,
- 3) faculty did not know answers to questions asked, and
- 4) faculty displayed a lack of interest.

A fault frequently identified by students is faculty members do not have either enough time or enough enthusiasm for academic advising (Chatharampill, 1970).

Literature reviewed revealed that the contact between a faculty advisor and student advisee, as reported by students, occurred on an average of two to four times a year (Carstensen & Silberhorn, 1979, p. 6). A possible justification for the infrequent contact was discussed by Rosenberg (1969). He reported students believe their advisor lacked interest in them, and they could obtain better help from friends.

Other inadequacies of the advising system were reported by Kiell (1957). He observed the majority of students studied favored the current advising system, but they wanted an advisor who was more informed and who was available when they needed assistance. Respondents also indicated a need for more career guidance and an advisor who was more informal and less business-like.

In summary, researchers observe that students view advisors as knowledgeable, generally available and competent in procedural matters, and personally interested in them. They do not receive as much assistance in career planning and setting educational goals, or in planning beyond the specific course requirements and scheduling (Bostaph & Moore, 1980; Carney & Barak, 1976; Crockett, 1978; Grites, 1979).

#### Advising satisfaction and student characteristics

Studies reviewed discussed the relationship of advising conditions and selected advisee characteristics to student satisfaction with academic advising (Dewey, 1980; Grites, 1982; Kasworm, 1980; Kuh & Sturgis, 1980; Levine & Weingart, 1973; Morehead & Johnson, 1964; Reehling, 1980; Rosenberg, 1969; Rossman, 1967, 1968; Sauders & Erving, 1984). Factors of academic advising which led to student satisfaction with the advisor and the advising system were identified by Rosenberg (1958). He reported satisfaction did not differ among students:

- 1) in regard to number of advising sessions and the length of the meetings,
- 2) whose advisors made use of campus referral agencies and who initiated group meetings on common concerns,
- 3) who had contact with the advisor outside the advisory situation,
- 4) whose advisor was in his or her department,
- 5) whose advisor had previous professional teaching experience,
- 6) whose length of noncontact with the advisor was of a shorter one than a longer one.

The effect of academic advising on student grade point average was studied in the Department of Electrical Engineering at North Carolina State University (Morehead & Johnson, 1964). Morehead and Johnson hypothesized:

- 1) The mean grade point average of the experimental group would be higher than the mean grade point average of the control group.
- 2) The dropout rate of the control group would be greater than the dropout rate of the experimental group.

The experimental group received the following types of academic advising:

- 1) Two individual meetings with academic advisor each semester (each 20 minutes in length). Individual meetings were utilized to discuss academic progress. Additional meetings were possible but were left up to the advisee to initiate.
- 2) Two group meetings each semester (each 45 minutes in length). Group meetings consisted of instruction, advice and discussion. Instruction was given in effective study habits, study schedule, and class participation. University and departmental rules and regulations were also discussed at the group meetings.

Control group received the following types of academic advising:

- 1) Group meetings once during academic year (during orientation week).
- 2) Individual help given during course scheduling period in each semester.
- 3) Students notified of mid-term failures by advisor.
- 4) Students were extended invitations to go to advisor office for consultations at any time.

Though the study does not specify that other factors contributing to grade point average were controlled, results indicated grade point averages for the experimental group were significantly higher than the grade point averages for the control group. The rate of dropouts for the experimental group was smaller than the dropout rate for the control group, though the difference was not statistically significant.

Researchers have studied the relationship of student age and advising with mixed results. Kasworm (1980) reported that there were no significant associations of age grouping (students less than 25 years of age vs. students aged 25 years or older) with regard to student use of advising services, financial aid assistance, job placement service, and career and personal counseling services. Results also indicated that there were no significant associations of age grouping in relation to satisfaction with advising received from their advisor for these advising needs. Other investigators have found that adult learners (aged 25 years or older) may experience a lack of self-confidence as they return and progress through school (Sauders & Erving, 1984). Furthermore, researchers state that many returning, older students receive little encouragement from faculty to continue their studies (Dewey, 1980; Grites, 1982; Kuh & Sturgis, 1980; Reehling, 1980). These researchers suggest that more advising time is required for these older, nontraditional students.

Aptitude, achievement, and retention patterns in men and women engineering students and the relationship to advising was the subject of a study reviewed (Durio & Kildow, 1980). Results indicated women entering engineering with ability comparable to that of male students were



more likely to obtain higher grades than the male students. The researchers stated academic ability and achievement were less related to retention in engineering women than men. They recommended since variables that lead to attrition for women were less identifiable, there was a need for planned advising programs that addressed female student concerns in the early years of engineering training.

Student characteristics and advisor availability and the effect on student advising satisfaction was studied by Rossman (1967, 1968). A sample of college freshmen were divided into two groups. One group received advising assistance from faculty with release time from teaching assignments, the other group of faculty advisors were faculty with no release time. Results indicated gender of the student was a factor in the frequency of advising usage and in satisfaction with advising. Women advised by release time faculty were most likely to seek assistance for course planning from their advisor, and were more likely to be satisfied with their advisors. Students who had a release time advisor had more advisor contacts than students with an advisor with no release time. Men and women with release time advisors sought advising assistance from them for problems of career planning. No differences were found between the two groups in regard to students seeking the advisors help with personal problems. Students with release time advisors were reported to be more likely to have seen their advisor as someone with whom they had developed a relationship beyond that of course selection or registration assistance.

### Faculty and student perception of advising satisfaction

The literature reviewed revealed studies measuring advising satisfaction reported a difference in the perception of satisfaction from the student viewpoint and the faculty one (Griffith, 1977; Hoffman, 1972; McLaughlin & Starr, 1982; Grites, 1984a; Stickle, 1982).

Hoffman (1972) studied the problem of difference in perception in detail in a study of engineering students at Michigan State University. The purpose of the study was to determine:

- 1) What academic advisement services were supportive of perceived faculty priorities.
- 2) What academic advisement services were considered of major and minor importance by sectors of the undergraduate population.
- 3) What modifications of the present academic advisement system might be suggested by engineering undergraduates and instructional faculty in order to make the advisement program in the College of Engineering more effective. Results indicated students rated various advising services as being more necessary than did faculty. These were:
  - a) An advisor working with the undecided student in exploring new academic opportunities outside of engineering.
  - b) An advisor being readily available for consultation, especially on a drop-in basis.
  - c) An advisor writing letters of recommendation.
  - d) An advisor working with students to prepare for interviewing at the MSU Placement Bureau.

- e) An advisor helping with the evaluation of actual employment offers.
- f) An advisor assisting the student identify long-range career opportunities.
- g) An advisor providing information about admission to graduate school.

Faculty rated the service of working with students to improve their study habits as being more necessary than did students.

Hoffman (1972) looked at the difference between engineering undergraduates and faculty about preferred alternatives to proposed academic advising models when compared to the present advisement system. Students rated various advising plans as having more potential than faculty.

These were:

- 1) Training and hiring a set of seniors and giving them full responsibility for advising the sophomores through seniors in their department.
- 2) Using only full-time advisors to handle all undergraduate advisement in the College of Engineering.
- 3) Designing a data bank about job conditions and employer expectations.

Students reported personal contacts, services and communication were valued advising services. Students viewed alternative advisement ideas such as peer advising, no faculty advising or limited faculty advising as having greater potential than did the faculty. Students were more confident of the help they received from full-time counselors as compared

to teaching faculty. The study suggested students wish more information and guidance from faculty.

Faculty viewed helping students improve academic skills as a valued advising service. Faculty rated other advising alternatives as having weaker potential than did students. These were:

- 1) Utilizing only teaching faculty to advise all undergraduates.
- 2) Using faculty to advise sophomores through seniors and having full-time advisors work with freshmen.
- 3) Having faculty advise all Juniors/seniors and full-time advisors handle all freshman/sophomores.

Stickle (1982) sought to determine the effectiveness of the academic advising program from the viewpoint of the student and the faculty advisors. Stickle hypothesized faculty and student perceptions of the effectiveness of the faculty advising program would not differ significantly. He reported significant differences in perceived satisfaction involving the following areas of advising assistance.

- 1) Exploring occupational and professional plans.
- 2) Discussing the program of general education.
- 3) Exploring academic problems.
- 4) Discussing occupational and professional plans.
- 5) Class scheduling.

Faculty consistently rated their effectiveness higher than students rated faculty effectiveness in advising.

In addition, Griffith (1977) carried out a study to determine if there was a difference in the way students perceived the effectiveness

of the faculty advising program and the way in which faculty perceived their effectiveness as advisors. He reported faculty perceived their effectiveness as advisors. He reported faculty perceived their effectiveness as advisors more positively than students perceive the effectiveness of advising services rendered by faculty. While students' perceptions of their own effectiveness is consistent across departments.

Faculty advisors tend to rate themselves slightly higher than do students. Research studying advising indicated faculty advisors' attitudes toward effectiveness of advising were generally less negative than students' (McLaughlin & Starr, 1982). Describing the evaluation of an advising system in an engineering program, Vines (1987) reported faculty advisors perceived they had discharged the advising task in all areas in a satisfactory manner. Students reported high satisfaction with career planning assistance received and low satisfaction with personal counseling. The discrepancy in perception of satisfactory advising was addressed by Grites (1984a). He stated the tenure of the faculty advisor was related to the difference in perception. Grites observed that the longer advisors were advising, the less they seem to be involved with students; yet the more likely they were to feel they did a better job of advising.

Students view the quality of the advising experience based on the quality of the interpersonal relationship (Grites, 1981). Grites reported students rated advisors higher according to actual or desired contacts with their advisor, the advisor's knowledge of campus regulations and the number and length of advising sessions. He observed the quality

of the advising relationship is valued by the student rather than mere contact. Grites stated students rate faculty members differently than faculty members rate themselves. Students desire a warm, friendly, personal relationship with a faculty advisor. Faculty do not seem to put a strong emphasis on the quality of the advising relationship.

#### Summary

Past studies of academic advising reveal little common ground in regards to student perception of the quality of advising received. The interpersonal aspect of advising seems to be a key in advisee satisfaction (Grites, 1981; Hornbuckle, Mahoney & Borgard, 1979; Tiede, 1976). When the interpersonal advising relationship is satisfying, students are satisfied. This was true even when the student was not totally satisfied with information received from the advisor (Grites, 1981).

Faculty are inclined to rate the effectiveness of the advising system higher than students (Griffith, 1977; Hoffman, 1972; Burke, 1981). Student characteristics which have an impact on advising satisfaction were identified as department affiliation (Rosenberg, 1969), student grade point average (Morehead & Johnson, 1964), age of the student (Dewey, 1980; Grites, 1982; Kasworm, 1980; Kuh & Sturgis, 1980; Reehling, 1980; Sauders & Erving, 1984), and student gender (Durio & Kildow, 1980; Rossman, 1967, 1968; Whigham, 1988).

#### Overall Summary

Studies reviewed reveal that the role of the advisor can be described as assisting the student with registration, course selection, and

acquiring information on university policies. Faculty are used as the main provider of advising services at a majority of institutions of higher education. The use of professional advisors is the second most utilized means of providing advising services. The development of the interpersonal aspect of the advising relationship appears to be a central factor in satisfaction with advising. Also, student and faculty perceptions on effectiveness of advising differ with faculty generally rating themselves higher than students. Though researchers have studied the relationship of student characteristics and satisfaction with advising, the exact nature of this relationship is not fully understood.

Understanding the function and characteristics of a quality advisor and advising system will allow for a detailed investigation of an advising system. Evaluating an academic advising program will indicate the quality present. It should also identify problem areas and may give clues for further improvement.

## METHODS

## Introduction

This section will present the methods used to achieve the purpose of the study. This is to:

- 1) Determine the role of the academic advisor as perceived by the student.
- 2) Identify whether there is greater frequency of utilization of the academic advisor among students assigned to faculty advisors or among those assigned to professional advisors for the following specific advising needs:
  - a) Preregistration assistance,
  - b) Class add/drop assistance,
  - c) Curriculum planning assistance,
  - d) Career guidance assistance,
  - e) College rules and procedures assistance,
  - f) Department rules and procedures assistance, and
  - g) Personal counseling assistance.
- 3) Identify whether there is greater reported satisfaction with advising received from the assigned advisor among students assigned to faculty advisors or among those assigned to professional advisors for the specific advising needs stated above.
- 4) Identify the student characteristics associated with utilization of and satisfaction with one of the two types of assigned academic advisor.



### Subjects

Subjects who participated in the study were 404 graduating seniors enrolled in ten departments in the College of Engineering. Respondents were affiliated with their respective engineering departments as of May 17, 1986.

Table 3.1 lists the number of graduating senior students in the departments of the College of Engineering participating and their percentage of the total departmental graduating senior student population.

Table 3.1. Response data base to questionnaire (Source: Huston, Whigham & Van Gerpen, 1987)

| Department                   | Students/Total<br>Responding/Students | Percent<br>Responding |
|------------------------------|---------------------------------------|-----------------------|
| College-wide                 | 404/528                               | (76.5%)               |
| Aerospace Engineering        | 50/67                                 | (74.6%)               |
| Agricultural Engineering     | 14/17                                 | (82.4%)               |
| Material Science Engineering | 8/11                                  | (72.7%)               |
| Chemical Engineering         | 31/39                                 | (79.5%)               |
| Construction Engineering     | 41/53                                 | (77.4%)               |
| Electrical Engineering       | 146/178                               | (82.0%)               |
| Engineering Science          | 11/11                                 | (100.0%)              |
| Industrial Engineering       | 51/80                                 | (63.8%)               |
| Mechanical Engineering       | 41/59                                 | (69.5%)               |
| Nuclear Engineering          | 11/13                                 | (84.6%)               |

### Instrumentation

The questionnaire utilized for this study asked respondents for the following demographic information:

- 1) Major

- 2) Gender
- 3) Residence status
- 4) Grade point average
- 5) Age
- 6) Handicapping condition
- 7) Ethnic background

The questionnaire also asked respondents:

- 8) For date of entrance to Iowa State University (ISU)
- 9) If student entered ISU in College of Engineering
- 10) Status of major upon entrance to ISU
- 11) Status of graduating department versus department at entrance to ISU
- 12) If summer orientation was attended prior to entrance to ISU
- 13) If math placement was taken at entrance to ISU
- 14) If student was accurately placed in a math class upon entrance to ISU
- 15) If English placement exam was taken at entrance to ISU
- 16) If student was accurately placed in an English class upon entrance to ISU
- 17) If Freshman Engineering class was taken as a freshman
- 18) Their rating for advising portion of Freshman Engineering course
- 19) Their rating for career orientation portion of Freshman Engineering course
- 20) Their attendance at an advising/career seminar class
- 21) Their rating of advising/career seminar class

- 22) Their rating of overall advising in the College of Engineering at ISU

From this section of the survey the current investigation will focus on the following demographic variables:

- 1) Grade point average
- 2) Age
- 3) Gender

A review of the literature revealed that these student characteristics were variables that have been associated with student use and satisfaction with the academic advisor (Grites, 1982; Kasworm, 1980; Morehead & Johnson, 1964; Rossman, 1967; Rosenberg, 1958). Ten responses were used for students to identify the source where they sought academic advising assistance:

- 1) Academic Advisor: The departmental advisor assigned to the student
- 2) Other faculty member
- 3) Peer
- 4) Advising classes/seminar
- 5) Student Services: This is the University-wide office which provides career information and counseling services for any ISU student.
- 6) Engineering Classification: College of Engineering office which assists students with transferring in and out of the college; with adding and dropping classes; with registering for classes, and substitution of course requirements.

- 7) **Engineering Placement:** College of Engineering office which assists students with finding temporary employment during tenure at ISU and assists permanent job placement in engineering field upon graduation.
- 8) **Clerical Staff:** Refers to clerical staff in departmental or any College of Engineering office.
- 9) **Other Source:** This response could be marked but student was not asked to identify.
- 10) **No assistance received:** Assistance was not sought or received.

This investigation will utilize the following classifications:

- 1) **Academic advisor:** Departmental advisor assigned to a student.
- 2) **Other advising source(s):** Includes all sources except Academic advisor, mentioned above, including no assistance received.

Respondents were presented with the following list of specific advising needs. For each they were asked to identify the advising source listed above where they would seek assistance for this type of advising need.

The specific advising needs students were asked to respond to were:

- 1) Preregistration information
- 2) Class add/drop assistance
- 3) Curriculum planning
- 4) Information referral
- 5) University policies and procedures
- 6) College rules and procedures
- 7) Department rules and procedures
- 8) Personal counseling

- 9) Career guidance
- 10) Professional clubs/organizations
- 11) Professional exams
- 12) Resume preparation/interviewing techniques
- 13) Permanent job assistance
- 14) Summer/part-time job opportunities
- 15) Financial aid assistance

This study will focus on responses in the following categories:

- 1) Preregistration information
- 2) Class add/drop assistance
- 3) Curriculum planning
- 4) Career guidance
- 5) College rules and procedures
- 6) Department rules and procedures
- 7) Personal counseling

These variables were chosen for this study based on a review of the literature. Researchers identify the above variables as the advising needs most often associated with student use of and satisfaction with the academic advising system (Burke, 1981; Carstensen & Silberhorn, 1979; Guinn & Mitchell, 1986; Kozloff, 1985; Larsen & Brown, 1983).

### Procedure

The questionnaire utilized in this study was developed by the Engineering Education Projects Committee (see Appendix B). The purpose of the committee was to make a comparative evaluation of the different

advising models used in the College of Engineering; to determine whether certain minority groups were being properly advised; and to assess the College's overall strengths and weaknesses in advising (Huston, Whigham & Van Gerpen, 1987).

Data collection took place under the direction of the members of the Survey and Education Subcommittee of the Engineering Education Projects Committee, prior to the involvement of this researcher. Senior engineering students participating in the study were surveyed by means of direct distribution of the questionnaire in the graduation packet which each student must complete and return in order to complete graduation requirements. Distribution to each student was done in the Spring, 1986 semester. In 1988, the current researcher became involved in order to determine which type of advising system utilized in the College of Engineering, resulted in the greatest use and student satisfaction.

Students were categorized into two groups; those assigned to a faculty-based advising system member and those assigned to a member of the professional advisor-based advising system. Categorizing was done using student department affiliation. Students whose department affiliation was in Electrical Engineering received advising from the professional advisor-based system. Students with affiliation with any other College of Engineering department were categorized as receiving advising from the faculty-based advising system.

For each of the advising information sources, listed in the instrumentation subsection, the student was asked for two responses. First, the student was to identify which advising source they utilized when

seeking advising information. Second, they were to judge the quality of advising assistance received. The respondent used a ten point scale ranging from a response of one, identified as "poor", to a response of ten, identified as "excellent". The scale utilized on this questionnaire corresponds to the measuring scales used by Larsen and Brown (1983), and McAnulty, O'Connor and Sklare (1984). In this study the information was analyzed to determine which advising source provided the greatest degree of student satisfaction.

### Null hypotheses

Null Hypothesis 1a: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant difference in choice of advising source (assigned advisor versus other advisor) between students who are assigned a professional advisor and students who are assigned a faculty advisor.

Null hypothesis 1b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students who are assigned a professional advisor or students who are assigned a faculty advisor.

Null Hypothesis 2a: For the seven dependent variables addressing use, it is hypothesized that there will be no relationship between use of advising source (assigned advisor versus other advisor) and student grade point average.

Null Hypothesis 2b: For the seven dependent variables addressing

use, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student grade point average.

Null Hypothesis 3a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students based on grade point average.

Null Hypothesis 3b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student grade point average.

Null Hypothesis 4a: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant difference in the source of advising received (assigned advisor versus other advisor) based on the age of students (less than 25 years of age or 25 years of age or older).

Null Hypothesis 4b: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and source of advising (assigned advisor versus other advisor) at either age (less than 25 years of age and 25 years of age or older).

Null Hypothesis 5a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant



difference between students of either age.

Null Hypothesis 5b: For the seven dependent variables addressing satisfaction with advising needs, it is hypothesized that there will be no significant interaction between type of assigned advisor and age of the student.

Null Hypothesis 6a: For the seven dependent variables addressing use, it is hypothesized that there will be no significant difference in the source of advising received (assigned advisor versus other advisor) based on student gender.

Null Hypothesis 6b: For the seven dependent variables addressing use, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student gender.

Null Hypothesis 7a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students of either gender.

Null Hypothesis 7b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student gender.

### Statistical methods to analyze data

The data utilized consisted of two types:

- 1) Reported frequency of use of assigned advisor for specific advising needs.
- 2) Reported level of satisfaction with advising received.

Usage data were evaluated statistically using the analytical tool of chi-square. Satisfaction data were evaluated statistically by Analysis of Variance (ANOVA). One-way Anova was used for satisfaction data used to evaluate Hypothesis 1. Two-way Anova was utilized for analysis of the remaining Hypotheses. This was done in order to statistically analyze the interactions between the different independent variables.

## RESULTS

### Introduction

The primary purpose of this study is to evaluate student attitudes toward advising in terms of whether students are assigned faculty advisors or professional advisors. Thus, the chief independent variable of the study is the type of advisor the student is assigned. Other independent variables are grade point average, age and gender of the student.

There are two categories of dependent variables in the study. First, the students' usage of their assigned advisor versus another advising source is examined for the seven specific advising needs. The second type of dependent variable is the students' satisfaction with the advising received from their assigned advisor for seven specific advising needs.

Also discussed in this section is the apparent role of the academic advisor as reflected in the ways in which students use their advisor. The null hypotheses, presented in the Method section, are restated in this section and data are presented regarding the use of and satisfaction with advising received.

### Role of the advisor

As seen in the third column of Table 4.1, about 50% of student respondents reported utilizing their advisor for the following advising needs:

- 1) Preregistration assistance
- 2) Curriculum Planning assistance
- 3) Class Add/Drop assistance

Table 4.1. Percent of students seeking assistance from their assigned advisor<sup>a</sup> for various advising needs as a function of type of assigned advisor<sup>b</sup>

| Advising Need                   | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|---------------------------------|--------------------------|--------------|----------|-------------------------|------|
|                                 | Faculty                  | Professional | Combined |                         |      |
| Preregistration                 | 56.1                     | 48.9         | 53.5     | 1.57                    | 0.21 |
| Class Add/Drop                  | 48.8                     | 42.3         | 46.3     | 1.26                    | 0.26 |
| Curriculum Planning             | 57.9                     | 47.9         | 54.2     | 3.21                    | 0.07 |
| Career Guidance                 | 22.6                     | 13.0         | 19.1     | 4.57*                   | 0.03 |
| College Rules and Procedures    | 17.0                     | 14.7         | 16.2     | 0.19                    | 0.66 |
| Department Rules and Procedures | 32.3                     | 31.4         | 32.0     | 0.01                    | 0.94 |
| Personal Counseling             | 22.4                     | 9.8          | 17.9     | 8.22**                  | 0.01 |

<sup>a</sup> vs. Other advising sources.

<sup>b</sup> Data are presented here only for students who received advising assistance from their assigned advisor. The complete analyses are presented in Tables A.1 to A.7.

<sup>c</sup> Chi-square test is an analysis of data for students' reported use of their assigned advisor versus other sources for students assigned faculty advisors and students assigned professional advisors.

\*p < .05.

\*\*p < .01.

Less than 33% of responding students reported use of their assigned advisor for other advising needs, therefore, these needs were not considered a primary role of the advisor. Though students assigned professional advisors reported less use of their advisor than students assigned faculty advisors for these advising needs (see Table 4.1 for percentages of reported use) the primary role of the advisor can be viewed as one who assists with the advising needs mentioned above.

When looking at the variable student reported satisfaction with advising received from their assigned advisor, student respondents seem to have the highest degree of satisfaction with those duties that they perceived as fitting the role of the advisor. Based on student reported satisfaction (Table 4.2), the following are the specific advising needs that students identified (from highest reported mean satisfaction to lowest):

- 1) College Rules and Procedures assistance (M = 6.82),
- 2) Class Add/Drop assistance (M = 6.50),
- 3) Preregistration assistance (M = 6.50),
- 4) Department Rules and Procedures assistance (M = 6.35),
- 5) Curriculum Planning assistance (M = 6.32),
- 6) Career Guidance assistance (M = 6.05, and
- 7) Personal Counseling assistance (M = 6.04).

### Summary

Based on patterns of reported student use (use over or near the 50% mark), the advisor is one who provides Preregistration assistance,

Table 4.2. Statistics for satisfaction<sup>a</sup> of advising for specific advising needs as a function of type of assigned advisor

| Advising Need                                |    | Type of Assigned Advisor |              |          |
|--|----|--------------------------|--------------|----------|
|  |    | Faculty                  | Professional | Combined |
| Preregistration <sup>b</sup>                 | M  | 6.78                     | 5.95         | 6.50     |
|  | SD | 2.57                     | 2.30         | 2.51     |
|  | n  | 136                      | 69           | 205      |
| Class Add/Drop <sup>b</sup>                  | M  | 6.66                     | 6.19         | 6.50     |
|  | SD | 2.53                     | 2.44         | 2.50     |
|  | n  | 117                      | 59           | 176      |
| Curriculum Planning <sup>b</sup>             | M  | 6.73                     | 5.48         | 6.32     |
|  | SD | 2.68                     | 2.46         | 2.67     |
|  | n  | 138                      | 67           | 205      |
| Career Guidance <sup>b</sup>                 | M  | 6.47                     | 4.78         | 6.05     |
|  | SD | 2.66                     | 3.06         | 2.84     |
|  | n  | 54                       | 18           | 72       |
| College Rules and Procedures <sup>b</sup>    | M  | 6.75                     | 6.95         | 6.82     |
|  | SD | 2.42                     | 1.77         | 2.21     |
|  | n  | 40                       | 20           | 60       |
| Department Rules and Procedures <sup>b</sup> | M  | 6.52                     | 6.05         | 6.35     |
|  | SD | 2.54                     | 2.36         | 2.48     |
|  | n  | 75                       | 43           | 118      |
| Personal Counseling <sup>b</sup>             | M  | 6.22                     | 5.31         | 6.04     |
|  | SD | 2.99                     | 2.29         | 2.87     |
|  | n  | 52                       | 13           | 65       |

<sup>a</sup>Satisfaction was measured on a 10-point scale where 1 = poor and 10 = excellent.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

Class Add/Drop assistance, and Curriculum Planning assistance. Student reported satisfaction with advising received from their assigned advisor, though slightly over the mid-point on the scale for all variables, was greatest for the specific advising needs College Rules and Procedures, Class Add/Drop assistance, and Preregistration assistance.

#### Use of assigned advisor

The first prediction of this study was that students assigned to a professional advisor would exhibit greater usage of their assigned advisor for advising assistance and would exhibit greater satisfaction with advising than students assigned to a faculty advisor. In order to evaluate this hypothesis statistically, the following null hypotheses were tested:

Null Hypothesis 1a: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant difference in choice of advising source (assigned advisor versus other advisor) between students who are assigned a professional advisor and students who are assigned a faculty advisor.

In order to address hypothesis 1a, a chi-square analysis was conducted for each advising need. For each analysis, the two independent variables were type of assigned advisor (faculty versus professional) and source of actual advising assistance (assigned advisor versus other advisor). The complete data tables and results of statistical analyses are presented in Tables A.1 through A.7. A summary of these analyses is presented in Table 4.1.

As seen in the third column of Table 4.1, 53.5% of the responding students reported utilizing their assigned academic advisor for Preregistration assistance. Though 56.1% of students assigned faculty advisors and 48.9% of students assigned professional advisors reported utilizing their own advisor, this did not represent a statistically significant difference. Similarly, as can be seen in column three of Table 4.1, 54% of all students reported using their assigned advisor for Curriculum Planning assistance and 46% of all advisees went to their assigned advisor for Class Add/Drop assistance. For these two variables, analysis of the data (as presented in Tables A.2-A.3) revealed no significant differences existing between students who were assigned faculty advisors and those students assigned professional advisors.

Overall, students reported lower utilization of their assigned advisor for the advising needs Career Guidance and Personal Counseling, as compared with other advising needs. When students were compared in terms of type of assigned advisor for the advising need Career Guidance, students assigned professional advisors reported less usage of their assigned advisor than did students assigned faculty advisors (see Table A.4 and 4.1). This difference in reported usage was significant ( $p < .05$ ).

Less than one in every five students reported seeking assistance from their assigned advisor for Personal Counseling (Table A.7 and 4.1). Of the 17.9% who reported using their advisor for this need, students who were assigned a faculty advisor reported greater usage (22.4%) of their assigned advisor than those students who were assigned a



professional advisor (9.8%). This difference in reported usage was significant ( $p < .01$ ).

### Satisfaction and assigned advisor

Null Hypothesis 1b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students who are assigned a professional advisor or students who are assigned a faculty advisor.

In terms of satisfaction with advising related to the seven specific advising needs (Hypothesis 1b), data were analyzed using the statistical procedure analysis of variance. For each analysis, the independent variable was type of assigned advisor (faculty versus professional). The complete data tables and results of statistical analyses are presented in Tables A.8 through A.14. A summary of these analyses is presented in Table 4.2 and Table 4.3. Statistically significant differences were found for the advising needs Preregistration assistance, Curriculum Planning assistance, and Career Guidance assistance (Table 4.3). That is, students assigned faculty advisors reported greater satisfaction with the advising received from their assigned advisor than students who were assigned professional advisors.

### Summary

Students assigned faculty advisors were significantly different from students assigned professional advisors in their use of their advisor for the advising needs Career Guidance and Personal Counseling. In each

Table 4.3. Summary of analyses of variance for satisfaction with advising for specific advising needs as a function of type of assigned advisor<sup>a</sup>

| Advising Needs                               |   | Advisor |
|--|---|---------|
| Preregistration <sup>b</sup>                 | F | 5.14*   |
|  | p | 0.03    |
| Class Add/Drop <sup>b</sup>                  | F | 1.41    |
|  | p | 0.24    |
| Curriculum Planning <sup>b</sup>             | F | 10.36** |
|  | p | 0.01    |
| Career Guidance <sup>b</sup>                 | F | 5.04*   |
|  | p | 0.03    |
| College Rules and Procedures <sup>b</sup>    | F | 0.11    |
|  | p | 0.75    |
| Department Rules and Procedures <sup>b</sup> | F | 1.01    |
|  | p | 0.32    |
| Personal Counseling <sup>b</sup>             | F | 1.04    |
|  | p | 0.32    |

<sup>a</sup>This table is a summary of analyses presented in Tables A.8 to A.14.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

\*p < .05.

\*\*p < .01.

case, students assigned to faculty members were more likely to go to their own advisor for assistance than were students assigned to professional advisors.

Students assigned faculty advisors reported greater satisfaction with advising assistance received from their advisor than did students who were assigned professional advisors for three of the seven specific advising needs (Preregistration, Curriculum Planning, and Career Guidance).

#### Use of assigned advisor and student grade point average

The current study predicted that students with a high grade point average would report greater use of their assigned advisor than students with a lower grade point average for specific advising needs. Furthermore, it was predicted that students with a high grade point average who were assigned to professional advisors would report greater usage of their advisor than students with a high grade point average who were assigned to faculty advisors. In order to evaluate these hypotheses statistically, the following null hypotheses were tested:

Null Hypothesis 2a: For the seven dependent variables addressing use, it is hypothesized that there will be no relationship between use of advising source (assigned advisor versus other advisor) and student grade point average.

In order to address this hypothesis, a chi-square analysis was conducted for each level of student grade point average. For each analyses, the independent variables were the source of actual advising assistance

(assigned advisor versus other advisor) and student grade point average (3.2-4.0, 2.8-3.19, 2.0-2.79). The complete data tables and results of statistical analyses are presented in Tables A.15 through A.21. A summary of these analyses is presented in Table 4.4.

Null Hypothesis 2b: For the seven dependent variables addressing use, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student grade point average.

In order to address this hypothesis, a chi-square analysis was conducted for each level of student grade point average. For each of the seven analyses, the independent variables were type of assigned advisor (faculty versus professional) and the source of actual advising assistance (assigned advisor versus other advisor). The data collected to test the above hypothesis are presented in Appendix A, Tables A.15 through A.21. A summary of these analyses is presented in Table 4.4.

Hypothesis 2a predicted that there would be no relationship between use of advising source (assigned advisor versus other advisor) and grade point average. As seen in the combined column of Table 4.4, as grade point average decreased student use of their assigned advisor also decreased for most advising needs. However, it was only for the advising need Preregistration assistance that the difference in reported use of the assigned advisor was statistically significant ( $p < .01$ ). (Chi-square values for this hypothesis are shown in the 'combined' row for each advising need).

Table 4.4. Percent of students seeking assistance from their assigned advisor<sup>a</sup> for various advising needs as a function of type of assigned advisor and student grade point average<sup>b</sup>

| Advising Need       | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|---------------------|--------------------------|--------------|----------|-------------------------|------|
|                     | Faculty                  | Professional | Combined |                         |      |
| Preregistration     |                          |              |          |                         |      |
| 3.2-4.00            | 66.7                     | 58.3         | 62.6     | 0.59                    | 0.44 |
| 2.8-3.19            | 62.0                     | 51.2         | 57.9     | 0.88                    | 0.35 |
| 2.0-2.79            | 46.4                     | 31.6         | 42.7     | 1.99                    | 0.16 |
| Combined            |                          |              |          | 12.06**                 | 0.01 |
| Class Add/Drop      |                          |              |          |                         |      |
| 3.2-4.00            | 46.8                     | 43.3         | 45.1     | 0.04                    | 0.84 |
| 2.8-3.19            | 53.5                     | 47.7         | 51.3     | 0.17                    | 0.68 |
| 2.0-2.79            | 46.5                     | 34.2         | 43.4     | 1.32                    | 0.25 |
| Combined            |                          |              |          | 1.71                    | 0.43 |
| Curriculum Planning |                          |              |          |                         |      |
| 3.2-4.00            | 67.2                     | 53.5         | 60.3     | 1.89                    | 0.17 |
| 2.8-3.19            | 63.4                     | 39.5         | 54.4     | 5.21*                   | 0.02 |
| 2.0-2.79            | 49.1                     | 48.6         | 49.0     | 0.00                    | 1.00 |
| Combined            |                          |              |          | 3.44                    | 0.18 |

<sup>a</sup> vs. Other advising sources.

<sup>b</sup> Data are presented here only for students who received advising assistance from their assigned advisor. The complete analyses are presented in Tables A.15 to A.21.

<sup>c</sup> Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

\*\*p < .01.

Table 4.4. Continued

| Advising Need                          | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|--|--------------------------|--------------|----------|-------------------------|------|
|  | Faculty                  | Professional | Combined |                         |      |
| <b>Career Guidance</b>                 |                          |              |          |                         |      |
| 3.2-4.00                               | 31.1                     | 11.9         | 21.7     | 5.48*                   | 0.02 |
| 2.8-3.19                               | 21.4                     | 20.9         | 21.2     | 0.00                    | 1.00 |
| 2.0-2.79                               | 18.5                     | 5.6          | 15.3     | 2.58                    | 0.10 |
| Combined                               |                          |              |          | 2.21                    | 0.34 |
| <b>College Rules and Procedures</b>    |                          |              |          |                         |      |
| 3.2-4.00                               | 18.3                     | 19.0         | 18.6     | 0.00                    | 1.00 |
| 2.8-3.19                               | 18.8                     | 16.7         | 18.0     | 0.01                    | 0.97 |
| 2.0-2.79                               | 15.1                     | 5.6          | 12.7     | 1.43                    | 0.23 |
| Combined                               |                          |              |          | 2.10                    | 0.36 |
| <b>Department Rules and Procedures</b> |                          |              |          |                         |      |
| 3.2-4.00                               | 36.7                     | 42.4         | 39.5     | 0.20                    | 0.65 |
| 2.8-3.19                               | 30.4                     | 31.0         | 30.6     | 0.00                    | 1.00 |
| 2.0-2.79                               | 31.1                     | 13.9         | 26.8     | 3.24                    | 0.07 |
| Combined                               |                          |              |          | 4.97                    | 0.09 |
| <b>Personal Counseling</b>             |                          |              |          |                         |      |
| 3.2-4.00                               | 27.1                     | 8.8          | 18.1     | 5.40*                   | 0.02 |
| 2.8-3.19                               | 18.8                     | 7.3          | 14.5     | 1.89                    | 0.16 |
| 2.0-2.79                               | 22.1                     | 14.7         | 17.9     | 0.47                    | 0.49 |
| Combined                               |                          |              |          | 1.39                    | 0.51 |

Hypothesis 2b addressed the interaction of type of assigned advisor and source of advising for each level of grade point average (3.2-4.0, 2.8-3.19, 2.0-2.79). For each grade point average category, the relevant chi-square value is shown at the right in Table 4.4. Students with a high grade point average (3.2-4.0) who were assigned to faculty advisors, reported statistically greater use of their advisor (Table 4.4) than students in the same grade point average category (3.2-4.0) who were assigned professional advisors for the advising needs Career Guidance and Personal Counseling. Students with a grade point average in the middle category (2.8-3.19) and assigned a faculty advisor reported using their advisor more frequently than students with a similar grade point average but assigned a professional advisor for the advising need Curriculum Planning.

Satisfaction with assigned advisor and student grade point average

The current study predicted that students with a high grade point average would report greater satisfaction with advising received from their assigned advisor than students with a lower grade point average. Furthermore, it was predicted that students with high grade point averages who were assigned to a professional advisor would report greater satisfaction with advising received from their advisor than students with high grade point averages who were assigned to a faculty advisor. In order to evaluate these hypotheses statistically the following null hypotheses were tested.

Null Hypothesis 3a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students based on grade point average.

In order to address this hypothesis and Hypothesis 3b below, data were analyzed using the statistical procedure analysis of variance. For each analysis, the independent variables were type of assigned advisor (faculty versus professional) and student grade point average (3.2-4.0, 2.8-3.19, 2.0-2.79). Hypothesis 3a was evaluated by examining the main effect of student grade point average. The complete data tables and results of statistical analyses are presented in Tables A.22 through A.28. A summary of these analyses are presented in Tables 4.5 and 4.6.

Null Hypothesis 3b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student grade point average (3.2-4.0, 2.8-2.19, 2.0-2.79).

In order to address this hypothesis, the interaction from the analysis of variance described for Hypothesis 3a was examined. Hypothesis 3a predicted that students at different levels of grade point average would not differ in reporting satisfaction with advising received from their assigned advisor. As presented in the third column of Table 4.5, it appears that students with a high grade point average may be more satisfied than students with lower grade point average. However, only for the advising need Class Add/Drop assistance was the difference in reported



Table 4.5. Statistics for satisfaction<sup>a</sup> of advising for specific advising needs as a function of type of assigned advisor and student grade point average

| Advising Need                |          |    | Type of Assigned Advisor |              |          |
|------------------------------|----------|----|--------------------------|--------------|----------|
|                              |          |    | Faculty                  | Professional | Combined |
| Preregistration <sup>b</sup> | 3.2-4.00 | M  | 7.39                     | 5.83         | 6.68     |
|                              |          | SD | 2.24                     | 1.86         | 2.20     |
|                              |          | n  | 42                       | 35           | 77       |
|                              | 2.8-3.19 | M  | 6.61                     | 6.10         | 6.44     |
|                              |          | SD | 2.51                     | 2.69         | 2.57     |
|                              |          | n  | 43                       | 22           | 65       |
|                              | 2.0-2.79 | M  | 6.42                     | 6.00         | 6.34     |
|                              |          | SD | 2.83                     | 2.83         | 2.81     |
|                              |          | n  | 51                       | 12           | 63       |
|                              | Combined | M  | 6.78                     | 5.93         | 6.50     |
|                              |          | SD | 2.57                     | 2.30         | 2.51     |
|                              |          | n  | 136                      | 69           | 205      |
| Class Add/Drop <sup>b</sup>  | 3.2-4.00 | M  | 8.11                     | 5.97         | 7.10     |
|                              |          | SD | 1.50                     | 2.56         | 2.32     |
|                              |          | n  | 29                       | 26           | 55       |
|                              | 2.8-3.19 | M  | 6.79                     | 6.05         | 6.54     |
|                              |          | SD | 2.39                     | 2.22         | 2.34     |
|                              |          | n  | 38                       | 20           | 58       |
|                              | 2.0-2.79 | M  | 5.72                     | 6.85         | 5.96     |
|                              |          | SD | 2.72                     | 2.58         | 2.71     |
|                              |          | n  | 50                       | 13           | 63       |
|                              | Combined | M  | 6.66                     | 6.19         | 6.50     |
|                              |          | SD | 2.53                     | 2.44         | 2.50     |
|                              |          | n  | 117                      | 59           | 176      |

<sup>a</sup>Satisfaction was measured on a 10-point scale where 1 = poor and 10 = excellent.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

Table 4.5. Continued

| Advising Need                                |          |    | Type of Assigned Advisor |              |          |
|--|----------|----|--------------------------|--------------|----------|
|  |          |    | Faculty                  | Professional | Combined |
| Curriculum<br>Planning <sup>b</sup>          | 3.2-4.00 | M  | 7.32                     | 5.44         | 6.50     |
|  |          | SD | 2.55                     | 2.37         | 2.63     |
|  |          | n  | 41                       | 32           | 73       |
|  | 2.8-3.19 | M  | 6.64                     | 4.89         | 6.15     |
|  |          | SD | 2.50                     | 2.53         | 2.61     |
|  |          | n  | 44                       | 17           | 61       |
|  | 2.0-2.79 | M  | 6.34                     | 6.12         | 6.29     |
|  |          | SD | 2.87                     | 2.52         | 2.77     |
|  |          | n  | 53                       | 18           | 71       |
|  | Combined | M  | 6.73                     | 5.48         | 6.32     |
|  |          | SD | 2.68                     | 2.46         | 2.67     |
|  |          | n  | 138                      | 67           | 205      |
| Career<br>Guidance <sup>b</sup>              | 3.2-4.00 | M  | 6.79                     | 4.72         | 6.24     |
|  |          | SD | 2.84                     | 2.70         | 2.91     |
|  |          | n  | 19                       | 7            | 36       |
|  | 2.8-3.19 | M  | 5.60                     | 4.12         | 5.05     |
|  |          | SD | 2.80                     | 3.38         | 3.05     |
|  |          | n  | 15                       | 9            | 24       |
|  | 2.0-2.79 | M  | 6.80                     | 8.00         | 6.91     |
|  |          | SD | 2.33                     | 0.00         | 2.25     |
|  |          | n  | 20                       | 2            | 22       |
|  | Combined | M  | 6.47                     | 4.78         | 6.05     |
|  |          | SD | 2.66                     | 3.06         | 2.84     |
|  |          | n  | 54                       | 18           | 72       |
| College Rules<br>and Procedures <sup>b</sup> | 3.2-4.00 | M  | 6.82                     | 6.91         | 6.87     |
|  |          | SD | 2.36                     | 1.31         | 1.86     |
|  |          | n  | 11                       | 11           | 22       |
|  | 2.8-3.19 | M  | 6.62                     | 7.43         | 6.90     |
|  |          | SD | 2.44                     | 2.44         | 2.41     |
|  |          | n  | 13                       | 7            | 20       |
|  | 2.0-2.79 | M  | 6.82                     | 5.50         | 6.67     |
|  |          | SD | 2.59                     | 0.71         | 2.48     |
|  |          | n  | 16                       | 2            | 18       |
|  | Combined | M  | 6.75                     | 6.95         | 6.82     |
|  |          | SD | 2.43                     | 1.77         | 2.21     |
|  |          | n  | 61                       | 40           | 20       |

Table 4.5. Continued

| Advising Need                                   |          |    | Type of Assigned Advisor |              |          |
|---|----------|----|--------------------------|--------------|----------|
|   |          |    | Faculty                  | Professional | Combined |
| Department Rules<br>and Procedures <sup>b</sup> | 3.2-4.00 | M  | 6.82                     | 6.48         | 6.64     |
|   |          | SD | 2.47                     | 1.83         | 2.14     |
|   |          | n  | 22                       | 25           | 47       |
|   | 2.8-3.19 | M  | 6.91                     | 5.84         | 6.50     |
|   |          | SD | 2.35                     | 3.08         | 2.66     |
|   |          | n  | 21                       | 13           | 34       |
|   | 2.0-2.79 | M  | 6.07                     | 4.40         | 5.84     |
|   |          | SD | 2.70                     | 2.31         | 2.69     |
|   |          | n  | 32                       | 5            | 37       |
|   | Combined | M  | 6.52                     | 6.05         | 6.35     |
|   |          | SD | 2.54                     | 2.36         | 2.48     |
|   |          | n  | 75                       | 43           | 118      |
| Personal<br>Counseling <sup>b</sup>             | 3.2-4.00 | M  | 6.63                     | 6.00         | 6.48     |
|   |          | SD | 2.81                     | 1.59         | 2.55     |
|   |          | n  | 16                       | 5            | 21       |
|   | 2.8-3.19 | M  | 5.85                     | 4.67         | 5.63     |
|   |          | SD | 3.29                     | 0.58         | 2.99     |
|   |          | n  | 13                       | 3            | 16       |
|   | 2.0-2.79 | M  | 6.14                     | 5.00         | 5.93     |
|   |          | SD | 3.04                     | 3.47         | 3.08     |
|   |          | n  | 23                       | 5            | 28       |
|   | Combined | M  | 6.22                     | 5.31         | 6.04     |
|   |          | SD | 2.99                     | 2.29         | 2.87     |
|   |          | n  | 52                       | 13           | 65       |

Table 4.6. Summary of analysis of variance for satisfaction with advising for specific advising needs as a function of type of assigned advisor and student grade point average<sup>a</sup>

| Advising Needs                               |   | Advisor | GPA   | Advisor by GPA |
|--|---|---------|-------|----------------|
| Preregistration <sup>b</sup>                 | F | 6.35*   | 0.97  | 1.02           |
|  | p | 0.02    | 0.39  | 0.37           |
| Class Add/Drop <sup>b</sup>                  | F | 3.55    | 4.36* | 5.51**         |
|  | p | 0.07    | 0.02  | 0.01           |
| Curriculum Planning <sup>b</sup>             | F | 11.60** | 0.89  | 1.78           |
|  | p | 0.01    | 0.42  | 0.18           |
| Career Guidance <sup>b</sup>                 | F | 3.02    | 1.72  | 0.98           |
|  | p | 0.09    | 0.19  | 0.39           |
| College Rules and Procedures <sup>b</sup>    | F | 0.06    | 0.04  | 0.57           |
|  | p | 0.82    | 0.97  | 0.58           |
| Department Rules and Procedures <sup>b</sup> | F | 2.65    | 2.01  | 0.52           |
|  | p | 0.11    | 0.14  | 0.60           |
| Personal Counseling <sup>b</sup>             | F | 1.10    | 0.47  | 0.04           |
|  | p | 0.30    | 0.63  | 0.97           |

<sup>a</sup>This table is a summary of analyses presented in Tables A.22 to A.28.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

\*p < .05.

\*\*p < .01.

satisfaction between students with a high grade point average and those students with lower grade point averages statistically significant (Table 4.6, column 2,  $p < .05$ ).

As shown in the first column of Table 4.6, students assigned faculty advisors reported greater and statistically significant satisfaction with their assigned advisor than students assigned professional advisors for the advising needs Preregistration assistance and Curriculum Planning. These results are essentially the same as those previously reported (p. 58, second paragraph and Table 4.3).

The interaction of type of assigned advisor and student grade point average were the elements addressed by Hypothesis 3b. It was found that students with a high grade point average (3.2-4.0) who were assigned faculty advisors reported greater satisfaction than students at the same grade point average (3.2-4.0) who were assigned to professional advisors for the advising need Class Add/Drop assistance. In contrast, just the opposite was true for students with low grade point averages (Table 4.5). No other interactions between type of assigned advisor and grade point average were found to be significant.

### Summary

When looking at the relationship between use of advising source and student grade point average a pattern of use was evident. As student grade point average decreased student use of their assigned advisor also decreased. This pattern of use was significant only for the advising need Preregistration assistance. Students with a high grade point average and

assigned to a faculty advisor were more likely to seek assistance from their advisor than students with the same grade point average who were assigned to a professional advisor for two of the seven advising needs (Career Guidance and Personal Counseling). Students with a grade point in the middle category who were assigned a faculty advisor were more likely to seek assistance from their advisor than students in the same grade point average category but who were assigned to a professional advisor for the advising need Curriculum Planning.

Students with high grade point averages appeared to be more satisfied with advising they received from their own advisor than students assigned professional advisors for two of the seven specific advising needs (Pre-registration assistance and Curriculum Planning). The one pattern of interaction between type of assigned advisor and grade point average which was found to be significant was for the advising need Class Add/Drop assistance. Students with a high grade point average (3.2-4.0) who were assigned faculty advisors were more satisfied with advising they received from their advisor than their counterparts who were assigned professional advisors. For students with a low grade point average (2.0-2.79), just the opposite was found (i.e., greater satisfaction was found for those students who were assigned to professional advisors).

#### Use of assigned advisor and student age

This study predicted that students who were 25 years of age or older would exhibit greater usage of their advisor for specific advising needs than students less than 25 years in age. Similarly, it was predicted

that students aged 25 years or older and assigned to a professional advisor would exhibit greater use of their advisor for specific advising needs than students assigned to a faculty advisor. In order to evaluate these hypotheses statistically, the following null hypotheses were tested.

Null Hypothesis 4a: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant difference in the source of advising received (assigned advisor versus other advisor) based on the age of students (less than 25 years of age or 25 years of age or older).

In order to address this hypothesis, a chi-square analysis was conducted for each advising need. For each of the seven analyses, the independent variables were the source of actual advising assistance (assigned advisor versus other advisor) and the age of the student (less than 25 years of age or 25 years of age or older). The complete data tables and results of statistical analyses are presented in Tables A.29 through A.35. A summary of these analyses is presented in Table 4.7.

Null Hypothesis 4b: For the seven dependent variables addressing usage, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and source of advising (own advisor versus other sources) at either age (less than 25 years of age and 25 years of age or older).

In terms of usage of the assigned advisor for each of the seven specific advising needs, a chi-square analysis was conducted for each age group. For each analysis, the independent variables were type of assigned advisor (faculty advisor versus professional advisor) and the

Table 4.7. Percent of students seeking assistance from their assigned advisor<sup>a</sup> for various advising needs as a function of assigned advisor and student age<sup>b</sup>

| Advising Need              | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|----------------------------|--------------------------|--------------|----------|-------------------------|------|
|                            | Faculty                  | Professional | Combined |                         |      |
| <b>Preregistration</b>     |                          |              |          |                         |      |
| <25                        | 56.7                     | 52.2         | 55.1     | 0.45                    | 0.51 |
| >25                        | 50.0                     | 34.6         | 42.6     | 0.76                    | 0.39 |
| Combined                   |                          |              |          | 1.49                    | 0.22 |
| <b>Class Add/Drop</b>      |                          |              |          |                         |      |
| <25                        | 49.1                     | 42.2         | 46.6     | 1.14                    | 0.28 |
| >25                        | 44.8                     | 42.3         | 44.4     | 0.01                    | 0.98 |
| Combined                   |                          |              |          | 1.27                    | 0.27 |
| <b>Curriculum Planning</b> |                          |              |          |                         |      |
| <25                        | 59.4                     | 47.4         | 55.2     | 3.89*                   | 0.05 |
| >25                        | 46.4                     | 50.0         | 48.1     | 0.00                    | 1.00 |
| Combined                   |                          |              |          | ***                     |      |
| <b>Career Guidance</b>     |                          |              |          |                         |      |
| <25                        | 24.6                     | 12.5         | 20.4     | 5.91*                   | 0.02 |
| >25                        | 7.1                      | 15.4         | 11.1     | ***                     |      |
| Combined                   |                          |              |          | 4.54*                   | 0.04 |

<sup>a</sup>vs. Other advising sources.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor. The complete analyses are presented in Tables A.29 to A.35.

<sup>c</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

\*\*p < .01.

\*\*\*Unable to compute Chi-square value.



Table 4.7. Continued

| Advising Need                          | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|--|--------------------------|--------------|----------|-------------------------|------|
|  | Faculty                  | Professional | Combined |                         |      |
| <b>College Rules and Procedures</b>    |                          |              |          |                         |      |
| <25                                    | 17.4                     | 18.2         | 17.7     | 0.01                    | 0.98 |
| >25                                    | 14.3                     | 0.0          | 7.4      | ***                     |      |
| Combined                               |                          |              |          | 0.20                    | 0.67 |
| <b>Department Rules and Procedures</b> |                          |              |          |                         |      |
| <25                                    | 33.3                     | 36.0         | 34.3     | 0.13                    | 0.72 |
| >25                                    | 25.0                     | 11.5         | 18.5     | 0.85                    | 0.36 |
| Combined                               |                          |              |          | 0.01                    | 0.95 |
| <b>Personal Counseling</b>             |                          |              |          |                         |      |
| <25                                    | 22.0                     | 11.2         | 18.3     | 4.73*                   | 0.03 |
| >25                                    | 25.9                     | 4.0          | 15.4     | ***                     |      |
| Combined                               |                          |              |          | 8.22**                  | 0.01 |

source of actual advising assistance (assigned advisor versus other advisor). The data collected to test the above hypothesis are presented in the Appendix, Tables A.29 through A.35. A summary of these analyses is presented in Table 4.7.

Hypothesis 4a predicted that students of either age would utilize the same sources when seeking advising assistance. The third column of Table 4.7 presents the relevant data and the 'combined' row for each advising need presents the relevant chi-square statistic. Analysis of these data revealed that only for the advising needs Career Guidance and Personal Counseling did the choice of advising source change to a statistically significant degree with age of the student. 20.4% of the responding students less than 25 years of age and 11.1% of students aged 25 years or older, reported utilizing their assigned advisor for the advising need Career Guidance. 18.3% of the responding students less than 25 years of age and 15.4% of students aged 25 years or older, reported utilizing their assigned advisor for the advising need Personal Counseling. In other words, students less than 25 years of age were more likely to seek assistance for Career Guidance and Personal Counseling from their assigned advisor than were students aged 25 years or older.

Hypothesis 4b addressed the interaction of type of assigned advisor and age, predicting that these two variables would not be related to the source of students' advising assistance. Students less than 25 years of age and assigned faculty advisors, reported greater use of their assigned advisor than students less than 25 years of age who were assigned to professional advisors for the advising needs Curriculum Planning,

Career Guidance and Personal Counseling (See Table 4.7). These were significant ( $p < .05$ ). Among students older than 25, no significant patterns were found. That is, the advising source that older students utilized when seeking assistance did not depend on whether the student was assigned a faculty advisor or a professional advisor.

It should be noted that for several advising needs a small sample of older students, especially for those assigned professional advisors, precluded an analysis using the chi-square statistic. Due to this reason, this may limit the power to predict student behavior, in regard to student age and use of assigned advisor, for a less homogeneous population.

#### Satisfaction with assigned advisor and age of student

This study predicted that students who were 25 years of age or older would report greater satisfaction with advising received from their assigned advisor for specific advising needs than students less than 25 years in age. Similarly, it was predicted that students 25 years of age or older and assigned to a professional advisor would report greater satisfaction with advising received from their own advisor than student 25 years in age or older who were assigned to a faculty advisor.

Null Hypothesis 5a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students of either age.

In order to address this hypothesis and Hypothesis 5b below, data were analyzed using the statistical procedure analysis of variance.

For each analysis, the independent variables were type of assigned advisor (faculty advisor versus professional advisor) and age of the student. Hypothesis 5a was evaluated by examining the main effect of age. The complete data tables and results of statistical analyses are presented in Tables A.36 through A.42. A summary of these analyses is presented in Table 4.8 and Table 4.9.

Null Hypothesis 5b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant interaction between type of assigned advisor and age of the student.

In order to address this Hypothesis, the interaction from the analysis of variance described for Hypothesis 5a was examined. Hypothesis 5a predicted that students in different age groups would not differ in their report of satisfaction with the advising they received from their assigned advisor. As presented in the third column of Table 4.8, it appears that students less than 25 years of age may be more satisfied with the advising received from their assigned advisor than students 25 years of age or older for six of the seven specific advising needs. However, the difference in reported satisfaction with advising received from the assigned advisor based on age of the student (Table 4.9) was found to be significant ( $p < .05$ ) only for the specific advising need Personal Counseling.

In Table 4.9, analysis of the data for reported satisfaction with advising received based only on the type of assigned advisor is reported (column one). These results are essentially the same as those previously reported (p. 58, second paragraph and Table 4.3).

Table 4.8. Statistics for satisfaction with advising for specific advising needs as a function of type of assigned advisor and student age<sup>a</sup>

| Advising Need                |               |    | Type of Assigned Advisor |              |          |
|------------------------------|---------------|----|--------------------------|--------------|----------|
|                              |               |    | Faculty                  | Professional | Combined |
| Preregistration <sup>b</sup> | <25           | M  | 6.87                     | 5.92         | 6.55     |
|                              |               | SD | 2.40                     | 2.36         | 2.42     |
|                              |               | n  | 122                      | 60           | 182      |
|                              | <u>&gt;25</u> | M  | 6.00                     | 6.11         | 6.05     |
|                              |               | SD | 3.79                     | 1.97         | 3.15     |
|                              |               | n  | 14                       | 9            | 23       |
|                              | Combined      | M  | 6.78                     | 5.95         | 6.50     |
|                              |               | SD | 2.57                     | 2.30         | 2.51     |
|                              |               | n  | 136                      | 69           | 205      |
| Class Add/Drop <sup>b</sup>  | <25           | M  | 6.60                     | 6.23         | 6.49     |
|                              |               | SD | 2.47                     | 2.35         | 2.44     |
|                              |               | n  | 104                      | 48           | 152      |
|                              | <u>&gt;25</u> | M  | 7.16                     | 6.00         | 6.63     |
|                              |               | SD | 3.03                     | 2.87         | 2.95     |
|                              |               | n  | 13                       | 11           | 24       |
|                              | Combined      | M  | 6.66                     | 6.19         | 6.50     |
|                              |               | SD | 2.53                     | 2.44         | 2.50     |
|                              |               | n  | 117                      | 59           | 176      |

<sup>a</sup>Satisfaction was measured on a 10-point scale where 1 = poor and 10 = excellent.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

Table 4.8. Continued

| Advising Need                                | Type of Assigned Advisor |         |              |          |      |
|--|--------------------------|---------|--------------|----------|------|
|  |                          | Faculty | Professional | Combined |      |
| Curriculum Planning <sup>b</sup>             | <25                      | M       | 6.58         | 5.58     | 6.35 |
|  |                          | SD      | 2.65         | 2.40     | 2.62 |
|  |                          | n       | 125          | 54       | 179  |
|  | <u>&gt;25</u>            | M       | 7.16         | 5.08     | 6.12 |
|  |                          | SD      | 2.97         | 2.73     | 2.99 |
|  |                          | n       | 13           | 13       | 26   |
|  | Combined                 | M       | 6.73         | 5.47     | 6.32 |
|  |                          | SD      | 2.68         | 2.46     | 2.67 |
|  |                          | n       | 138          | 67       | 205  |
| Career Guidance <sup>b</sup>                 | <25                      | M       | 6.43         | 4.86     | 6.10 |
|  |                          | SD      | 2.66         | 2.80     | 2.74 |
|  |                          | n       | 52           | 14       | 66   |
|  | <u>&gt;25</u>            | M       | 7.50         | 5.50     | 5.50 |
|  |                          | SD      | 3.54         | 6.37     | 4.03 |
|  |                          | n       | 2            | 4        | 6    |
|  | Combined                 | M       | 6.47         | 4.78     | 6.05 |
|  |                          | SD      | 2.66         | 3.06     | 2.84 |
|  |                          | n       | 54           | 18       | 72   |
| College Rules<br>and Procedures <sup>b</sup> | <25                      | M       | 6.75         | 6.95     | 6.83 |
|  |                          | SD      | 2.26         | 1.78     | 2.09 |
|  |                          | n       | 36           | 20       | 56   |
|  | <u>&gt;25</u>            | M       | 6.00         | 0.00     | 6.75 |
|  |                          | SD      | 4.04         | 0.00     | 4.04 |
|  |                          | n       | 4            | 0        | 4    |
|  | Combined                 | M       | 6.75         | 6.95     | 6.82 |
|  |                          | SD      | 2.42         | 1.78     | 2.21 |
|  |                          | n       | 40           | 20       | 60   |

Table 4.8. Continued

| Advising Need                                   |               |    |      | Type of Assigned Advisor |              |          |
|---|---------------|----|------|--------------------------|--------------|----------|
|   |               |    |      | Faculty                  | Professional | Combined |
| Department Rules<br>and Procedures <sup>b</sup> | <25           | M  | 6.64 | 6.15                     | 6.46         |          |
|   |               | SD | 2.41 | 2.33                     | 2.38         |          |
|   |               | n  | 68   | 40                       | 108          |          |
|   | <u>&gt;25</u> | M  | 7.20 | 5.50                     | 5.20         |          |
|   |               | SD | 2.39 | 3.54                     | 3.26         |          |
|   |               | n  | 7    | 3                        | 10           |          |
|   | Combined      | M  | 6.52 | 6.05                     | 6.35         |          |
|   |               | SD | 2.54 | 2.36                     | 2.48         |          |
|   |               | n  | 75   | 43                       | 118          |          |
| Personal Counseling <sup>b</sup>                | <25           | M  | 6.58 | 5.17                     | 6.29         |          |
|   |               | SD | 2.92 | 2.33                     | 2.84         |          |
|   |               | n  | 45   | 12                       | 57           |          |
|   | <u>&gt;25</u> | M  | 3.86 | 7.00                     | 4.25         |          |
|   |               | SD | 2.47 | 0.00                     | 2.55         |          |
|   |               | n  | 7    | 1                        | 8            |          |
|   | Combined      | M  | 6.22 | 5.31                     | 6.04         |          |
|   |               | SD | 2.99 | 2.29                     | 2.87         |          |
|   |               | n  | 52   | 13                       | 65           |          |

Table 4.9. Summary of analyses of variance for satisfaction with advising for specific advising needs as a function of type of assigned advisor and student age<sup>a</sup>

| Advising Needs                               |   | Advisor | Age   | Advisor by Age |
|--|---|---------|-------|----------------|
| Preregistration <sup>b</sup>                 | F | 4.96*   | 0.69  | 0.88           |
|  | p | 0.03    | 0.41  | 0.36           |
| Class Add/Drop <sup>b</sup>                  | F | 1.48    | 0.15  | 0.50           |
|  | p | 0.23    | 0.70  | 0.49           |
| Curriculum Planning <sup>b</sup>             | F | 10.12** | 0.01  | 0.77           |
|  | p | 0.01    | 0.98  | 0.39           |
| Career Guidance <sup>b</sup>                 | F | 4.70*   | 0.03  | 0.32           |
|  | p | 0.04    | 0.88  | 0.58           |
| College Rules and Procedures <sup>b</sup>    | F | ***     | ***   | ***            |
|  | p |         |       |                |
| Department Rules and Procedures <sup>b</sup> | F | 1.14    | 2.50  | 0.03           |
|  | p | 0.29    | 0.12  | 0.88           |
| Personal Counseling <sup>b</sup>             | F | 1.42    | 4.07* | 2.16           |
|  | p | 0.24    | 0.05  | 0.15           |

<sup>a</sup>This table is a summary of analyses presented in Tables A.22 to A.28.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

\*p < .05.

\*\*p < .01.

\*\*\*Unable to compute F value due to unequal cell size.



Hypothesis 5b addressed the interaction of type of assigned advisor and age, predicting that these two variables would have no effect on reported satisfaction with advising received from the students' assigned advisor. Analysis of the data (Table 4.9) revealed that no significant interaction existed between type of assigned advisor and age of the student in relation to reported satisfaction with advising received from the students' advisor. (Older students who were assigned to professional advisors reported no use of their assigned advisor for the advising need College Rules and Procedures.) Due to this, an analysis of variance was not possible for this variable.

#### Summary

When looking at the relationship between age and reported source of advising, a significant difference in patterns of reported use between younger and older students was found for only two of the seven advising needs. Younger students (less than 25 years of age) were more likely to seek assistance from their assigned advisor than older students (25 years of age or older) for Career Guidance and Personal Counseling. Also, younger students who were assigned faculty advisors reported greater (and statistically significant) use of their advisor than did their age-mates who were assigned professional advisors for three of the specific advising needs (i.e., Curriculum Planning, Career Guidance, and Personal Counseling). No such patterns were found among older students.

Younger students reported greater satisfaction with advising received from their advisor than older students only for the advising need Personal

Counseling. No pattern of interaction between age and satisfaction with the type of assigned advisor (faculty versus professional) was discernable from the data.

#### Use of assigned advisor and student gender

The current study predicted that female students would report higher use of their assigned advisor than male students for specific advising needs. Furthermore, it was predicted that female students assigned professional advisors would report higher use of their assigned advisor than females assigned faculty advisors. In order to evaluate these hypotheses statistically, the following null hypotheses were tested.

Null Hypothesis 6a: For the seven dependent variables addressing use, it is hypothesized that there will be no significant difference in the source of advising received (assigned advisor versus other advising) based on student gender.

In order to address this hypothesis, a chi-square analysis was conducted for each advising need. For each of the seven analyses, the independent variables were the source of actual advising assistance (assigned advisor versus other advisor) and student gender. The complete data tables and results of statistical analyses are presented in Tables A.43 through A.49. A summary of these analyses is presented in Table 4.10.

Null Hypothesis 6b: For the seven dependent variables addressing use, it is hypothesized that there will be no significant interaction between type of assigned advisor (faculty versus professional) and student gender.

Table 4.10. Percent of students seeking assistance from their assigned advisor<sup>a</sup> for various advising needs as a function of type of assigned advisor and student gender<sup>b</sup>

| Advising Need       | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|---------------------|--------------------------|--------------|----------|-------------------------|------|
|                     | Faculty                  | Professional | Combined |                         |      |
| Preregistration     |                          |              |          |                         |      |
| Male                | 55.9                     | 49.6         | 53.6     | 1.07                    | 0.30 |
| Female              | 57.7                     | 40.0         | 52.8     | 0.34                    | 0.56 |
| Combined            |                          |              |          | 0.00                    | 1.00 |
| Class Add/Drop      |                          |              |          |                         |      |
| Male                | 49.8                     | 43.2         | 47.3     | 1.18                    | 0.28 |
| Female              | 40.0                     | 30.0         | 37.1     | 0.03                    | 0.87 |
| Combined            |                          |              |          | 0.94                    | 0.34 |
| Curriculum Planning |                          |              |          |                         |      |
| Male                | 56.7                     | 49.2         | 53.9     | 1.56                    | 0.22 |
| Female              | 68.0                     | 30.0         | 57.1     | 2.81                    | 0.10 |
| Combined            |                          |              |          | 0.04                    | 0.86 |

<sup>a</sup>vs. Other advising sources.

<sup>b</sup>Data are presented here only for students who receive advising assistance from their assigned advisor. The complete analyses are presented in Tables A.29 to A.35.

<sup>c</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

\*\*p < .01.

\*\*\*Unable to compute Chi-square value.

Table 4.10. Continued

| Advising Need                          | Type of Assigned Advisor |              |          | Chi-square <sup>c</sup> | p    |
|--|--------------------------|--------------|----------|-------------------------|------|
|  | Faculty                  | Professional | Combined |                         |      |
| <b>Career Guidance</b>                 |                          |              |          |                         |      |
| Male                                   | 22.8                     | 13.3         | 19.2     | 4.08*                   | 0.05 |
| Female                                 | 20.8                     | 10.0         | 17.6     | ***                     |      |
| Combined                               |                          |              |          | 0.00                    | 1.00 |
| <b>College Rules and Procedures</b>    |                          |              |          |                         |      |
| Male                                   | 16.2                     | 13.5         | 15.2     | 0.27                    | 0.61 |
| Female                                 | 24.0                     | 30.0         | 25.7     | 0.00                    | 1.00 |
| Combined                               |                          |              |          | 1.88                    | 0.18 |
| <b>Department Rules and Procedures</b> |                          |              |          |                         |      |
| Male                                   | 31.9                     | 31.5         | 31.8     | 0.00                    | 1.00 |
| Female                                 | 36.0                     | 30.0         | 34.3     | 0.00                    | 1.00 |
| Combined                               |                          |              |          | 0.02                    | 0.91 |
| <b>Personal Counseling</b>             |                          |              |          |                         |      |
| Male                                   | 23.2                     | 10.7         | 18.5     | 7.18**                  | 0.01 |
| Female                                 | 16.0                     | 0.0          | 11.4     | ***                     |      |
| Combined                               |                          |              |          | 0.66                    | 0.42 |

In order to address this hypothesis, a chi-square analysis was conducted for each level of gender. For each of the seven analyses, the independent variables were type of advisor (faculty versus professional) and the source of actual advising assistance (assigned advisor versus other advisor).

The data collected to test the above hypothesis are presented in Appendix A, Tables A.43 through A.49. A summary of these analyses is presented in Table 4.10.

Hypothesis 6a predicted that students of either gender would report the same frequency of use of advising sources (assigned advisor versus other advisor). Though males reported greater frequency of use (Table 4.10) of their assigned advisor than females, a significant difference in pattern of use between male and female students was not found.

Hypothesis 6b addressed the interaction of type of assigned advisor and source of advising for each level of student gender. Male students assigned to faculty advisors reported greater use of their advisor (Table 4.10) than males assigned professional advisors for the advising needs Career Guidance and Personal Counseling. These were significant ( $p < .01$ ). In other words, male students assigned faculty advisors were found to be more likely to utilize their advisor than male students assigned professional advisors, for the specific advising needs, Career Guidance and Personal Counseling. (It should be noted that for the advising needs Career Guidance and Personal Counseling, the sample size of female students was too small to enable statistical analysis. Due to this, the ability to predict student behavior in regard to student use of their

assigned advisor and student age may be limited.)

Satisfaction with assigned advisor and student gender

The current study predicted that female students would report greater satisfaction than male students with advising received from their assigned advisor for specific advising needs. Furthermore, it was predicted that female students assigned professional advisors would report greater satisfaction with advising received from their advisor than females assigned faculty advisors. In order to evaluate these hypotheses statistically, the following null hypotheses were tested.

Null Hypothesis 7a: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant difference between students of either gender.

In order to address this Hypothesis and Hypothesis 7b below, data were analyzed using the statistical procedure analysis of variance. For each analysis, the independent variables were type of assigned advisor (faculty versus professional) and student gender. Hypothesis 7a was evaluated by examining the main effect of student gender. The complete data tables and results of statistical analyses are presented in Tables A.50 through A.56. A summary of these analyses are presented in Tables 4.11 and 4.12.

Null Hypothesis 7b: For the seven dependent variables addressing satisfaction with advising received from the assigned advisor for specific advising needs, it is hypothesized that there will be no significant

Table 4.11. Statistics for satisfaction<sup>a</sup> with advising for specific advising needs as a function of type of assigned advisor and student gender

| Advising Need                | Type of Assigned Advisor |         |              |          |      |
|------------------------------|--------------------------|---------|--------------|----------|------|
|                              |                          | Faculty | Professional | Combined |      |
| Preregistration <sup>b</sup> | Male                     | M       | 6.77         | 5.88     | 6.46 |
|                              |                          | SD      | 2.60         | 2.27     | 2.52 |
|                              |                          | n       | 122          | 65       | 187  |
|                              | Female                   | M       | 6.86         | 7.00     | 6.89 |
|                              |                          | SD      | 2.45         | 2.95     | 2.48 |
|                              |                          | n       | 14           | 4        | 18   |
|                              | Combined                 | M       | 6.78         | 5.95     | 6.50 |
|                              |                          | SD      | 2.57         | 2.30     | 2.51 |
|                              |                          | n       | 136          | 69       | 205  |
| Class Add/Drop <sup>b</sup>  | Male                     | M       | 6.56         | 6.08     | 6.39 |
|                              |                          | SD      | 2.56         | 2.45     | 2.52 |
|                              |                          | n       | 107          | 56       | 163  |
|                              | Female                   | M       | 7.80         | 8.34     | 7.93 |
|                              |                          | SD      | 1.94         | 0.58     | 1.71 |
|                              |                          | n       | 10           | 3        | 13   |
|                              | Combined                 | M       | 6.66         | 6.19     | 6.50 |
|                              |                          | SD      | 2.53         | 2.44     | 2.50 |
|                              |                          | n       | 117          | 59       | 176  |

<sup>a</sup>Satisfaction was measured on a 10-point scale where 1 = poor and 10 = excellent.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

Table 4.11. Continued

| Advising Need                                |          |    | Type of Assigned Advisor |              |          |
|--|----------|----|--------------------------|--------------|----------|
|  |          |    | Faculty                  | Professional | Combined |
| Curriculum Planning <sup>b</sup>             | Male     | M  | 6.62                     | 5.50         | 6.23     |
|  |          | SD | 2.69                     | 2.45         | 2.66     |
|  |          | n  | 121                      | 64           | 185      |
|  | Female   | M  | 7.53                     | 5.00         | 7.15     |
|  |          | SD | 2.53                     | 3.00         | 2.69     |
|  |          | n  | 17                       | 3            | 20       |
|  | Combined | M  | 6.73                     | 5.48         | 6.32     |
|  |          | SD | 2.68                     | 2.46         | 2.67     |
|  |          | n  | 138                      | 67           | 205      |
| Career Guidance <sup>b</sup>                 | Male     | M  | 6.33                     | 4.59         | 5.88     |
|  |          | SD | 2.68                     | 3.05         | 2.85     |
|  |          | n  | 49                       | 17           | 66       |
|  | Female   | M  | 7.80                     | 8.00         | 7.84     |
|  |          | SD | 2.39                     | 0.00         | 2.14     |
|  |          | n  | 5                        | 1            | 6        |
|  | Combined | M  | 6.47                     | 4.78         | 6.05     |
|  |          | SD | 2.66                     | 3.06         | 2.84     |
|  |          | n  | 54                       | 18           | 72       |
| College Rules<br>and Procedures <sup>b</sup> | Male     | M  | 6.83                     | 6.59         | 6.75     |
|  |          | SD | 2.56                     | 1.63         | 2.28     |
|  |          | n  | 34                       | 17           | 51       |
|  | Female   | M  | 6.34                     | 9.00         | 7.23     |
|  |          | SD | 1.51                     | 1.00         | 1.86     |
|  |          | n  | 6                        | 3            | 9        |
|  | Combined | M  | 6.76                     | 6.95         | 6.82     |
|  |          | SD | 2.42                     | 1.77         | 2.21     |
|  |          | n  | 40                       | 20           | 60       |



Table 4.11. Continued

| Advising Need                                   |          |    | Type of Assigned Advisor |              |          |
|---|----------|----|--------------------------|--------------|----------|
|   |          |    | Faculty                  | Professional | Combined |
| Department Rules<br>and Procedures <sup>b</sup> | Male     | M  | 6.55                     | 5.83         | 6.28     |
|   |          | SD | 2.52                     | 2.29         | 2.45     |
|   |          | n  | 66                       | 40           | 106      |
|   | Female   | M  | 6.34                     | 9.00         | 7.00     |
|   |          | SD | 2.79                     | 1.00         | 2.70     |
|   |          | n  | 9                        | 3            | 12       |
|   | Combined | M  | 6.52                     | 6.05         | 6.35     |
|   |          | SD | 2.54                     | 2.36         | 2.48     |
|   |          | n  | 75                       | 43           | 118      |
| Personal Counseling <sup>b</sup>                | Male     | M  | 6.30                     | 5.31         | 6.09     |
|   |          | SD | 2.96                     | 2.29         | 2.84     |
|   |          | n  | 48                       | 13           | 61       |
|   | Female   | M  | 5.25                     | 0.00         | 5.25     |
|   |          | SD | 3.69                     | 0.00         | 3.69     |
|   |          | n  | 4                        | 0            | 4        |
|   | Combined | M  | 6.22                     | 5.31         | 6.04     |
|   |          | SD | 2.99                     | 2.29         | 2.87     |
|   |          | n  | 52                       | 13           | 65       |

interaction between type of assigned advisor (faculty versus professional) and student gender.

In order to address this hypothesis, the interaction from the analysis of variance described for Hypothesis 7a was examined. Hypothesis 7a predicted that students based on gender would not differ in their reporting of satisfaction with the advising they received from their assigned advisor. As presented in the third column of Table 4.11, it appears that females may be more satisfied than males with the advising received from their assigned advisor. However, the difference in reported satisfaction with advising received from the assigned advisor based on students' gender (Table 4.12) was found to be significant ( $p < .05$ ) only for the advising need Class Add/Drop assistance.

Hypothesis 7b addressed the interaction of type of assigned advisor and student gender. Female students assigned professional advisors appear to be more satisfied (Table 4.11) with the advising received from their advisor than do female students assigned faculty advisors for the advising need Department Rules and Procedures. The interaction was significant ( $p < .05$ ). It should be noted that female students who were assigned professional advisors reported no use of their advisor for the advising need Personal Counseling, thus statistical analysis of this variable was not possible. Interpretation of the results of this study for this variable may be limited in regard to student gender and satisfaction with advising received from their assigned advisor.

Table 4.12. Summary of analysis of variance for satisfaction with advising for specific advising needs as a function of type of assigned advisor and student gender

| Advising Needs                               |   | Advisor | Gender | Advisor by Gender |
|--|---|---------|--------|-------------------|
| Preregistration <sup>b</sup>                 | F | 4.90*   | 0.30   | 0.50              |
|  | p | 0.03    | 0.60   | 0.49              |
| Class Add/Drop <sup>b</sup>                  | F | 1.13    | 4.34*  | 0.37              |
|  | p | 0.29    | 0.04   | 0.55              |
| Curriculum Planning <sup>b</sup>             | F | 9.34**  | 1.25   | 0.72              |
|  | p | 0.01    | 0.27   | 0.40              |
| Career Guidance <sup>b</sup>                 | F | 4.69*   | 2.38   | 0.39              |
|  | p | 0.04    | 0.13   | 0.54              |
| College Rules and Procedures <sup>b</sup>    | F | 0.11    | 0.37   | 2.97              |
|  | p | 0.75    | 0.55   | 0.10              |
| Department Rules and Procedures <sup>b</sup> | F | 0.88    | 0.81   | 3.97*             |
|  | p | 0.35    | 0.38   | 0.05              |
| Personal Counseling <sup>b</sup>             | F | ***     | ***    | ***               |
|  | p |         |        |                   |

<sup>a</sup>This table is a summary of analyses presented in Tables A.22 to A.28.

<sup>b</sup>Data are presented here only for students who received advising assistance from their assigned advisor.

\*p < .05.

\*\*p < .01.

\*\*\*Unable to compute F value due to unequal cell size.

Summary

When looking at the relationship between student gender and reported source of advising, male students assigned faculty advisors were more likely to use their advisors as a source for advising assistance than were their male counterparts who were assigned professional advisors for two of the seven specific advising needs (i.e., Career Guidance and Personal Counseling). No other significant patterns of use were discernable based on student gender.

Data on reported satisfaction with advising received from the assigned advisor revealed that female students were more satisfied with Class Add/Drop advising assistance than male students. Also, women who were assigned professional advisors reported greater satisfaction with the advising received from their assigned advisor than did women assigned faculty advisors for the specific advising need Department Rules and Procedures.

## DISCUSSION

The purpose of this study was to investigate differences in use of and satisfaction with two types of advisors in the undergraduate academic advising system in the College of Engineering at Iowa State University. This investigation sought to identify the student characteristics that may be related to the use of and satisfaction with a student's assigned academic advisor. Specific objectives of the study were to:

- 1) Describe the role of the advisor in terms of predominant patterns of student use.
- 2) Identify whether there is a greater frequency of utilization of the academic advisor among students assigned to faculty advisors or among those assigned to professional advisors for the following specific advising needs:
  - a) Preregistration information,
  - b) Class Add/Drop assistance,
  - c) Curriculum Planning,
  - d) Career Guidance,
  - e) College Rules and Procedures,
  - f) Department Rules and Procedures, and
  - g) Personal counseling.
- 3) Identify whether there is greater student reported satisfaction with advising assistance received from their assigned advisor among students assigned to faculty advisors or among those

assigned to professional advisors for the specific advising needs mentioned above.

- 4) Identify student characteristics associated with utilization of and satisfaction with one of the two types of assigned academic advisor.

#### Role of the Advisor

The final purpose of this study was to describe what the role of the advisor should be based on student reported use of and satisfaction with the assigned student academic advisor.

The primary role of the advisor, based on student reported frequency of use of their assigned advisor, is to assist students with Preregistration assistance, Curriculum Planning, and Class Add/Drop assistance. Students also reported the highest degree of satisfaction with the advising received from their assigned advisor for two of these three specific advising needs (Preregistration and Class Add/Drop assistance). The third advising need that students reported a high level of satisfaction with advising received from their assigned advisor was the advising need College Rules and Procedures. This is in agreement with sources from the literature which state that most students seek help from their advisor to provide information with degree requirements, course selection, course content, and other university requirements (Carstensen & Silberhorn, 1979; Kozloff, 1985).

Literature sources report that program and curriculum planning is a duty most students see as part of the role of the advisor (Burke, 1981;

Kiell, 1957; Morehead & Johnson, 1964; Vines, 1967). A possible reason why reported use of their assigned advisor for this advising need was not at a higher level may lie in the nature of the engineering curriculum. This type of program may tend to have a more prescribed curriculum than a liberal arts program, thus, students may not see the necessity in consulting with their advisor about curricular matters when very little choices are possible (Wankat, 1986).

Another possible explanation is offered by Donk and Oetting (1968). They observed that when the system is perceived by students as not meeting their needs, many students will look to another avenue to have their needs fulfilled. A "bootleg advising system" (Donk & Oetting, 1968, p. 401) may exist in parallel with the official advising system. The 'bootleg' system is a pseudo-system where students seeking assistance that they perceive cannot be given by their assigned advisor seek out other faculty or staff. These faculty or staff members are usually persons with which the student has a previously established interpersonal relationship.

#### Recommendations: The role of the advisor

Future research is needed to identify the sources from which students seek advising assistance apart from their assigned advisor. An advising need that warrants additional study is Personal Counseling assistance. Studies reviewed (Bossermaier, 1978; Carstensen & Silberhorn, 1979; Kozloff, 1985; Larsen & Brown, 1983) reported mixed student and advisor views on whether the student seeks or the advisor should provide personal

counseling. Results of this study (less than 18% used the assigned advisor for this need) seem to indicate that, in general, students do not utilize their assigned advisor for Personal Counseling assistance. A possible explanation, supported by Kozloff (1985), is that students are using their peers when seeking help with personal problems.

The creation of a formal or informal peer advising system may serve as a controlled outlet for student personal problems as well as providing other advising assistance. Research has reported that students are generally more satisfied with advising from peer advisors than from either faculty or professional advisors, though this satisfaction does not translate into greater academic success (McLaughlin & Starr, 1982). In addition, students may be making use of other appropriate sources on campus (e.g., the Student Counseling Service) for their personal counseling needs. Administrative and advising staff in the Engineering College may wish to address these issues in the future.

### Summary

Students perceive the role of the advisor as one who provides assistance in the areas degree requirements, course selection, course content, and other university requirements. Students assigned faculty advisors appeared to utilize them more often and report greater satisfaction with advising received than students assigned to professional advisors.

Students assigned professional advisors seek other sources of advising assistance more often and are less satisfied with advising received from their assigned advisor than students assigned faculty advisors.



Determining why students assigned professional advisors do not use their assigned advisor at the same level as students assigned faculty advisors is an area that requires further study. Further research is also needed to identify the advising assistance source or sources students utilize more frequently than the assigned advisor, to examine the effect of advisor/student ratio on use of and satisfaction with advising, and explore ways of identifying and serving special need students through the advising system.

#### Utilization of the Assigned Advisor

Students assigned faculty advisors reported greater use of their advisor for the advising needs Career Guidance assistance and Personal Counseling assistance than students assigned professional advisors. These findings are in contrast to the expectation, based on the literature, that students assigned professional advisors would be more favorable to their advisor than students assigned faculty advisors. Past studies may give an indication why these differences exist.

In terms of Career Guidance, an often mentioned benefit of a faculty-based advising program is the faculty member's expertise in the discipline (Crockett, 1985; Hallberg, 1964; Kramer, 1983; Passons, 1971). Wankat (1986) found that engineering students assigned to professional advisors reported missing the contact with faculty and expressed a desire for more assistance with career decisions. This lack of specific career knowledge has been cited in the literature as one limitation of utilizing professional advisors for academic advising (Seeger & McLean, 1985). Students participating in the study who were assigned professional

advisors may have felt that their advisors did not have the specific knowledge necessary to assist them with career questions. A question that needs to be addressed is how the current system can meet the needs of students that are assigned professional advisors in the area of Career Guidance.

Differences found between the two types of advising systems for the advising need Personal Counseling are more difficult to understand. This investigation predicted that students assigned professional advisors would report greater use of their advisor for Personal Counseling assistance than students who were assigned faculty advisors. This prediction was based on the view in the literature that the professional advisor has the time and commitment, and often times the training, to assist the student with problems apart from course scheduling and degree requirements (Habely, 1978; Robertson, 1958). What was found was that less than 10% of students who were assigned to a professional advisor reported utilizing their advisor for this advising need. In addition, students assigned faculty advisors though reported utilizing their advisor for Personal Counseling more than twice as often as students assigned professional advisors. One possible explanation for the reported low use of the advisor by students assigned professional advisors may be the student-to-advisor ratio. As mentioned in the introduction section of this study, the ratio of professional advisor to student is approximately 200 to 1. This could be a primary reason why students assigned to a professional advisor do not utilize their advisor for Personal Counseling assistance. Finally, the reader may remember that one

limitation of this study is that all the professional advisors worked within only one department in the college. Findings may be related to this phenomenon or to specific characteristics of the individual members of this group.

Recommendations: Use of the assigned advisor

The current study has found that students assigned faculty advisors use their advisor more frequently than students assigned professional advisors for the advising needs Career Guidance and Personal Counseling. Thus, for most advising needs there was not difference in use of the advisor between students assigned faculty advisors and students who were assigned professional advisors. Future researchers may wish to address this issue, to further explore the differences that exist between the two systems.

Since the time this data was collected, the advising systems described have converted to a computer-assisted advising system (degree audits) and to touch-tone registration. Both changes may have affected the use of the assigned advisor. Future researchers may wish to discover if these changes have resulted in changes in the patterns of student use. Other issues that could be addressed are the effect of advisor-to-student ratio on use of the assigned advisor, identifying characteristics of the assigned advisor that may impact on student use, and the advising source students use when they do not utilize their assigned advisor.

### Satisfaction with advising

With regard to satisfaction with advising received from their assigned advisor, students assigned faculty advisors reported statistically greater satisfaction than students assigned professional advisors for three of the seven advising needs. These needs were Preregistration assistance, Curriculum Planning, and Career Guidance. The literature on advising may help in finding an answer for these differences.

Sources in the literature suggest that the interpersonal relationship created between advisor and advisee often is a contributing factor in satisfaction with advising (Bossenmaier, 1978; Grites, 1981). Other factors identified in contributing to advising satisfaction were the availability of the advisor, the advisor's concern for the student as an individual, the attitude of the advisor toward students' personal problems and the advisor's view on education without restriction to major field (Chathaparampil, 1970). The inability to provide these satisfaction factors to students has been identified as a reason why students assigned to a faculty advisor are dissatisfied with the advising received (Spencer, Peterson & Kramer, 1982).

The findings of the current study suggest that these factors, may be present in the faculty-based advising system which was studied. Faculty advisors may have had more opportunities to develop stronger interpersonal relationships between themselves and their advisees since they also interact in a teacher/student relationship (Passons, 1971). Advising satisfaction, as defined by Dautch (1972), is the perceived quality of the advisor/advisee interpersonal relationship. Students may

perceive that an advisor who is also a faculty member in their chosen discipline will possess a high degree of interest in students. The product of this perception may be higher reported satisfaction with specific academic advising needs. The advising areas where the difference in satisfaction was significant (Preregistration, Curriculum Planning, and Career Guidance) are advising areas which are frequently identified as priority areas for advisors (Carstensen & Silberhorn, 1979) and areas in which students generally report satisfaction with the advising received from a faculty advisor (Grites, 1981; Vines, 1987).

Recommendations: Satisfaction with advising

If the interpersonal relationship between advisee and advisor has a large impact on reported student satisfaction, as the literature suggests, future researchers may wish to study the effects that advisor-to-student ratio may have on reported student satisfaction with advising received from the assigned advisor. Also, in light of the advising changes mentioned above (i.e., touch-tone registration and computer-assisted advising), administrators in the College of Engineering may wish to examine both systems further to determine whether student reported satisfaction with advising received from the assigned advisor has changed and what revisions in the system can be implemented to address these changes.

Usage of and Satisfaction with Advising as a  
Function of Student Characteristics

Student grade point average

Research by Morehead and Johnson (1964) suggests that greater accessibility to and use of the assigned advisor could result in higher student grade point averages. The current study found that, for most advising needs, use of the assigned advisor decreased as student grade point decreased. This pattern was significant for the advising need Preregistration assistance. Students who had high grade point averages and were assigned to a faculty advisor reported greater use of their advisor than students with high grade point averages and assigned to professional advisors for two of the seven advising needs (Career Guidance and Personal Counseling). Students in the middle category grade point average category who were assigned a faculty advisor reported greater use of their assigned advisor than students with similar grade point averages who were assigned professional advisors for the advising need Curriculum Planning.

Students with high grade point averages reported greater satisfaction than students with lower grade point averages for the advising need Class Add/Drop assistance. Also, students with high grade point averages who were assigned a faculty advisor reported greater satisfaction with the advising received from their advisor than students with high grade point averages who were assigned a professional advisor.

An explanation may be that assignment to a faculty advisor allows

for greater accessibility to the assigned advisor and, thus, greater use. This may also allow students to initiate and maintain higher quality interpersonal relationships with their instructors or advisors. Although a causal pattern has not been identified, two possibilities are reasonable. First, students with higher grade point averages may seek out a relationship with a faculty member because it satisfied their intellectual needs. On the other hand, the relationship may create interactions which actually influences the student's academic achievement.

#### Student age

Younger students (less than 25 years of age) appeared to have greater usage of and satisfaction with their advisor than older students (aged 25 or older). These differences were only significant in the advising areas Career Guidance and Personal Counseling for use of the assigned advisor. Differences were also found to be significant for satisfaction with advising received from the assigned advisor for the advising need Personal Counseling.

Generally, older students reported less usage of their advisor for most advising needs, though the small number of older students in this study did not allow for statistical analysis for each advising need.

Younger students advised by faculty advisors utilized their advisors at a significantly greater rate than students assigned professional advisors (for three advising needs). There was no significant pattern of interaction between type of advisor and satisfaction with advising received from the student's assigned advisor.

### Student gender

The small number of women students in this study precluded a thorough statistical analysis of the relationship between use of assigned advisor and student gender. Data on satisfaction with advising did reveal significant differences among women and men for some of the specific advising needs.

Women were more satisfied with the advising received from their assigned advisor than men for one of the specific advising needs (Class Add/Drop assistance). Furthermore, women assigned professional advisors reported greater satisfaction than women with faculty advisors for Department Rules and Procedures. This was the only comparison in the study for which students assigned a professional advisor reported greater satisfaction than students assigned to a faculty advisor.

### Recommendations: Use of and satisfaction with advising and student characteristics

The administrators in the College of Engineering may wish to explore further the relationships among access to the assigned advisor, subsequent use of and satisfaction with the advisor, and the student characteristics of grade point average, age, and gender.

If the previous researchers are correct about the relation between good advisor/advisee interpersonal relationships and the resulting quality of advising, administrators need to investigate why these relationships are not as developed for students with lower grade point averages and especially for those students advised by professional advisors. Further



investigation needs to examine the relationship between student grade point average and use of and satisfaction with advising from the advisor viewpoint as well as the student one. Do academic advisors relate differently to students based on their grade point average? Do students with higher grade point averages possess or demonstrate other common characteristics? Both of these topics should be addressed by future researchers.

The advising needs of the older and other nontraditional students (i.e., ethnic minorities and disabled students) warrant further study. Administrators of the College of Engineering need to determine if these nontraditional students have needs different from the traditional student. Insufficient data precluded such examination in this study. Future research should seek to identify these needs and propose alternate advising methods to meet these. Future studies may focus on how advisors in the College of Engineering can reach out to the older, nontraditional student.

Another nontraditional student in the field of engineering is the female student. Researchers may wish to focus on the components of an advising relationship that meet the academic needs of this group. Future studies may wish to discover what factors are involved in the use of and satisfaction with the advising system for women students. The attitudes and biases of male and female advisors should also be studied. Researchers should seek to discover if women students in engineering favor a male or female advisor. Also, researchers may wish to learn which type of advising system (faculty versus professional) better meets the needs of women engineering students.

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APPENDIX A

Table A.1. Frequency with which students seek preregistration assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 138                      | 56.1 | 69           | 48.9 | 207      | 53.5 |
| 2. Other advising <sup>a</sup> | 108                      | 43.9 | 72           | 51.1 | 180      | 46.5 |
| 3. Combined                    | 246                      |      | 141          |      | 387      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 1.57/p = .21.

Table A.2. Frequency with which student seek class add/drop assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 117                      | 48.8 | 60           | 42.3 | 187      | 46.3 |
| 2. Other advising <sup>a</sup> | 123                      | 51.3 | 82           | 57.7 | 205      | 53.7 |
| 3. Combined                    | 240                      |      | 142          |      | 392      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 1.26/p = 0.26.

Table A.3. Frequency with which students seek curriculum planning assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 139                      | 57.9 | 67           | 47.9 | 206      | 54.2 |
| 2. Other advising <sup>a</sup> | 101                      | 42.1 | 73           | 52.1 | 174      | 45.8 |
| 3. Combined                    | 240                      |      | 140          |      | 380      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 3.21/p = 0.07.

Table A.4. Frequency with which students seek career guidance assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 54                       | 22.6 | 18           | 13.0 | 72       | 19.1 |
| 2. Other advising <sup>a</sup> | 185                      | 77.4 | 120          | 87.0 | 305      | 80.9 |
| 3. Combined                    | 239                      |      | 138          |      | 377      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 4.57\*/p = 0.03.

\*p < .05.

Table A.5. Frequency with which students seek college rules and procedures assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 40                       | 17.0 | 20           | 14.7 | 60       | 16.2 |
| 2. Other advising <sup>a</sup> | 195                      | 83.0 | 116          | 85.3 | 311      | 83.8 |
| 3. Combined                    | 235                      |      | 137          |      | 371      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 0.19/p = 0.66.

Table A.6. Frequency with which students seek department rules and procedures assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 76                       | 32.3 | 43           | 31.4 | 119      | 32.0 |
| 2. Other advising <sup>a</sup> | 159                      | 67.7 | 94           | 68.6 | 253      | 68.0 |
| 3. Combined                    | 235                      |      | 137          |      | 372      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 0.01/p = 0.94.

Table A.7. Frequency with which students seek personal counseling assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor

| Source of Assigned Advising    | Type of Assigned Advisor |      |              |      |          |      |
|--------------------------------|--------------------------|------|--------------|------|----------|------|
|                                | Faculty                  |      | Professional |      | Combined |      |
|                                | N                        | %    | N            | %    | N        | %    |
| 1. Academic advising           | 52                       | 22.4 | 13           | 9.8  | 65       | 17.9 |
| 2. Other advising <sup>a</sup> | 180                      | 77.6 | 119          | 90.2 | 299      | 82.1 |
| 3. Combined                    | 232                      |      | 132          |      | 364      |      |

<sup>a</sup>All Other Advising sources (including No Advising received).

<sup>b</sup>Chi-square = 8.22\*\*/p = 0.01.

\*\*p < .01.

Table A.8. Analysis of variance source table for satisfaction with preregistration advising assistance

| Source of Variation | Sum of Squares | df  | Mean Square | F     | p    |
|---------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b> |                |     |             |       |      |
| Advisor             | 31.54          | 1   | 31.54       | 5.14* |      |
| Explained           | 31.54          | 1   | 31.54       | 5.14* | 0.03 |
| Residual            | 1247.71        | 203 | 6.15        |       |      |

\*p < .05.

Table A.9. Analysis of variance source table for satisfaction with class add/drop advising assistance

| Source of Variation | Sum of Squares | df  | Mean Square | F    | p    |
|---------------------|----------------|-----|-------------|------|------|
| <b>Main Effects</b> |                |     |             |      |      |
| Advisor             | 8.73           | 1   | 8.73        | 1.41 | 0.24 |
| Explained           | 8.73           | 1   | 8.73        | 1.41 | 0.24 |
| Residual            | 1083.28        | 174 | 6.23        |      |      |

Table A.10. Analysis of variance source table for satisfaction with curriculum planning assistance

| Source of Variation | Sum of Squares | df  | Mean Square | F       | p    |
|---------------------|----------------|-----|-------------|---------|------|
| <b>Main Effects</b> |                |     |             |         |      |
| Advisor             | 70.13          | 1   | 70.13       | 10.36** | 0.01 |
| Explained           | 70.13          | 1   | 70.13       | 10.36** | 0.01 |
| Residual            | 1374.26        | 203 | 6.77        |         |      |

\*\*p &lt; .01.



Table A.11. Analysis of variance source table for satisfaction with career guidance assistance

| Source of Variation | Sum of Squares | df | Mean Square | F     | p    |
|---------------------|----------------|----|-------------|-------|------|
| <b>Main Effects</b> |                |    |             |       |      |
| Advisor             | 38.34          | 1  | 38.34       | 5.04* | 0.03 |
| Explained           | 38.34          | 1  | 38.34       | 5.04* | 0.03 |
| Residual            | 532.54         | 70 | 7.61        |       |      |

\*p &lt; .01.

Table A.12. Analysis of variance source table for satisfaction with college rules and procedures assistance

| Source of Variation | Sum of Squares | df | Mean Square | F    | p    |
|---------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b> |                |    |             |      |      |
| Advisor             | 0.54           | 1  | 0.54        | 0.11 | 0.75 |
| Explained           | 0.54           | 1  | 0.54        | 0.11 | 0.75 |
| Residual            | 286.45         | 58 | 4.94        |      |      |

Table A.13. Analysis of variance source table for satisfaction with department rules and procedures assistance

| Source of Variation | Sum of Squares | df  | Mean Square | F    | p    |
|---------------------|----------------|-----|-------------|------|------|
| <b>Main Effects</b> |                |     |             |      |      |
| Advisor             | 6.13           | 1   | 6.13        | 1.01 | 0.32 |
| Explained           | 6.13           | 1   | 6.13        | 1.01 | 0.32 |
| Residual            | 708.63         | 116 | 6.11        |      |      |

Table A.14. Analysis of variance source table for satisfaction with personal counseling advising assistance

| Source of Variation | Sum of Squares | df | Mean Square | F    | p    |
|---------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b> |                |    |             |      |      |
| Advisor             | 8.50           | 1  | 8.50        | 1.04 | 0.32 |
| Explained           | 8.50           | 1  | 8.50        | 1.04 | 0.32 |
| Residual            | 517.45         | 63 | 8.21        |      |      |

Table A.15. Frequency with which students seek preregistration assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising | Type of Assigned Advisor                   |      |              |      |
|----------|-----------------------------|--|------|--------------|------|
|          |                             | Faculty                                    |      | Professional |      |
|          |                             | N  | %    | N            | %    |
| 3.2-4.0  | Academic advisor            | 42   | 66.7 | 35           | 58.3 |
|          | Other advisor               | 21   | 33.3 | 25           | 41.7 |
|          |                             | Chi-square = 0.59/p = 0.44 <sup>b</sup>    |      |              |      |
| 2.8-3.19 | Academic Advisor            | 44   | 62.0 | 22           | 51.2 |
|          | Other advisor               | 27   | 38.0 | 21           | 48.8 |
|          |                             | Chi-square = 0.88/p = 0.35 <sup>b</sup>    |      |              |      |
| 2.0-2.79 | Academic advisor            | 52   | 46.4 | 12           | 31.6 |
|          | Other advisor               | 60   | 53.6 | 26           | 68.4 |
|          |                             | Chi-square = 1.99/p = 0.16 <sup>b</sup>    |      |              |      |
| Combined | Academic advisor            | 138  |      | 69           |      |
|          | Other advisor               | 108  |      | 72           |      |
|          |                             | Chi-square = 12.06**/p = 0.01 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*\*p < .01.

Table A.16. Frequency with which student seek class add/drop assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising             | Type of Assigned Advisor |      |              |      |
|----------|---|--------------------------|------|--------------|------|
|          |   | Faculty                  |      | Professional |      |
|          |   | N                        | %    | N            | %    |
| 3.2-4.0  | Academic advisor                        | 29                       | 46.8 | 26           | 43.3 |
|          | Other advisor                           | 33                       | 53.2 | 34           | 56.7 |
|          | Chi-square = 0.04/p = 0.84 <sup>b</sup> |                          |      |              |      |
| 2.8-3.19 | Academic Advisor                        | 38                       | 53.5 | 21           | 47.7 |
|          | Other advisor                           | 33                       | 46.5 | 23           | 52.3 |
|          | Chi-square = 0.17/p = 0.68 <sup>b</sup> |                          |      |              |      |
| 2.0-2.79 | Academic advisor                        | 50                       | 46.7 | 13           | 34.2 |
|          | Other advisor                           | 57                       | 53.3 | 25           | 65.8 |
|          | Chi-square = 1.32/p = 0.25 <sup>b</sup> |                          |      |              |      |
| Combined | Academic advisor                        | 117                      |      | 60           |      |
|          | Other advisor                           | 119                      |      | 82           |      |
|          | Chi-square = 1.71/p = 0.43 <sup>b</sup> |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.17. Frequency with which students seek curriculum planning assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising | Type of Assigned Advisor                 |      |              |      |
|----------|-----------------------------|--|------|--------------|------|
|          |                             | Faculty                                  |      | Professional |      |
|          |                             | N  | %    | N            | %    |
| 3.2-4.0  | Academic advisor            | 41                                       | 67.2 | 32           | 53.3 |
|          | Other advisor               | 20                                       | 32.8 | 28           | 46.7 |
|          |                             | Chi-square = 1.89/p = 0.17 <sup>b</sup>  |      |              |      |
| 2.8-3.19 | Academic Advisor            | 45                                       | 63.4 | 17           | 39.5 |
|          | Other advisor               | 26                                       | 36.6 | 26           | 60.5 |
|          |                             | Chi-square = 5.21*/p = 0.02 <sup>b</sup> |      |              |      |
| 2.0-2.79 | Academic advisor            | 53                                       | 49.1 | 18           | 48.6 |
|          | Other advisor               | 55                                       | 50.9 | 19           | 51.4 |
|          |                             | Chi-square = 0.0/p = 1.00 <sup>b</sup>   |      |              |      |
| Combined | Academic advisor            | 139                                      |      | 67           |      |
|          | Other advisor               | 101                                      |      | 73           |      |
|          |                             | Chi-square = 3.44/p = 0.18 <sup>b</sup>  |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

Table A.18. Frequency with which students seek career guidance assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising | Type of Assigned Advisor                 |      |              |      |
|----------|-----------------------------|--|------|--------------|------|
|          |                             | Faculty                                  |      | Professional |      |
|          |                             | N  | %    | N            | %    |
| 3.2-4.0  | Academic advisor            | 19                                       | 31.1 | 7            | 11.9 |
|          | Other advisor               | 42                                       | 68.9 | 52           | 88.1 |
|          |                             | Chi-square = 5.48*/p = 0.02 <sup>b</sup> |      |              |      |
| 2.8-3.19 | Academic Advisor            | 15                                       | 21.4 | 9            | 20.9 |
|          | Other advisor               | 55                                       | 78.6 | 34           | 79.1 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup>  |      |              |      |
| 2.0-2.79 | Academic advisor            | 20                                       | 18.5 | 2            | 5.6  |
|          | Other advisor               | 88                                       | 81.3 | 34           | 94.4 |
|          |                             | Chi-square = 2.58/p = 0.10 <sup>b</sup>  |      |              |      |
| Combined | Academic advisor            | 54                                       |      | 18           |      |
|          | Other advisor               | 185                                      |      | 120          |      |
|          |                             | Chi-square = 2.21/p = 0.34 <sup>b</sup>  |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

Table A.19. Frequency with which students seek college rules and procedures assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising             | Type of Assigned Advisor |      |              |      |
|----------|---|--------------------------|------|--------------|------|
|          |   | Faculty                  |      | Professional |      |
|          |   | N                        | %    | N            | %    |
| 3.2-4.0  | Academic advisor                        | 11                       | 18.3 | 11           | 19.0 |
|          | Other advisor                           | 49                       | 81.7 | 47           | 81.0 |
|          | Chi-square = 0.00/p = 1.00 <sup>b</sup> |                          |      |              |      |
| 2.8-3.19 | Academic Advisor                        | 13                       | 18.8 | 7            | 16.7 |
|          | Other advisor                           | 56                       | 81.2 | 35           | 83.3 |
|          | Chi-square = 0.01/p = 0.97 <sup>b</sup> |                          |      |              |      |
| 2.0-2.79 | Academic advisor                        | 16                       | 15.1 | 2            | 5.6  |
|          | Other advisor                           | 90                       | 84.9 | 34           | 94.4 |
|          | Chi-square = 1.43/p = 0.23 <sup>b</sup> |                          |      |              |      |
| Combined | Academic advisor                        | 40                       |      | 20           |      |
|          | Other advisor                           | 195                      |      | 126          |      |
|          | Chi-square = 2.10/p = 0.36 <sup>b</sup> |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.20. Frequency with which students seek department rules and procedures assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| 3.2-4.0  | Academic advisor            | 22                                      | 36.7 | 25           | 42.4 |
|          | Other advisor               | 38                                      | 63.3 | 34           | 57.6 |
|          |                             | Chi-square = 0.20/p = 0.65 <sup>b</sup> |      |              |      |
| 2.8-3.19 | Academic Advisor            | 21                                      | 30.4 | 13           | 31.0 |
|          | Other advisor               | 48                                      | 69.6 | 29           | 69.0 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup> |      |              |      |
| 2.0-2.79 | Academic advisor            | 33                                      | 31.1 | 5            | 13.9 |
|          | Other advisor               | 73                                      | 68.9 | 31           | 86.1 |
|          |                             | Chi-square = 3.24/p = 0.07 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 76                                      |      | 43           |      |
|          | Other advisor               | 159                                     |      | 94           |      |
|          |                             | Chi-square = 4.97/p = 0.09 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.



Table A.21. Frequency with which students seek personal counseling assistance from their assigned advisor vs. other sources as a function of two types of assigned advisor and student grade point average

| Average  | Source of Assigned Advising | Type of Assigned Advisor                 |      |              |      |
|----------|-----------------------------|--|------|--------------|------|
|          |                             | Faculty                                  |      | Professional |      |
|          |                             | N  | %    | N            | %    |
| 3.2-4.0  | Academic advisor            | 16                                       | 27.1 | 5            | 8.8  |
|          | Other advisor               | 43                                       | 72.9 | 52           | 91.2 |
|          |                             | Chi-square = 5.40*/p = 0.02 <sup>b</sup> |      |              |      |
| 2.8-3.19 | Academic Advisor            | 13                                       | 18.8 | 3            | 7.3  |
|          | Other advisor               | 56                                       | 81.2 | 38           | 92.7 |
|          |                             | Chi-square = 1.89/p = 0.16 <sup>b</sup>  |      |              |      |
| 2.0-2.79 | Academic advisor            | 23                                       | 22.1 | 5            | 14.7 |
|          | Other advisor               | 81                                       | 77.9 | 29           | 85.3 |
|          |                             | Chi-square = 0.47/p = 0.49 <sup>b</sup>  |      |              |      |
| Combined | Academic advisor            | 62                                       |      | 13           |      |
|          | Other advisor               | 180                                      |      | 119          |      |
|          |                             | Chi-square = 1.39/p = 0.51 <sup>b</sup>  |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the grade point average variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

Table A.22. Analysis of variance source table for satisfaction with preregistration assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df  | Mean Square | F     | p    |
|--------------------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b>            |                |     |             |       |      |
| Advisor                        | 38.99          | 1   | 38.99       | 6.35* | 0.02 |
| Grade point average            | 11.87          | 2   | 5.93        | 0.97  | 0.39 |
| <b>2-Way Interaction</b>       |                |     |             |       |      |
| Advisor by grade point average | 12.52          | 2   | 6.26        | 1.02  | 0.37 |
| Explained                      | 55.92          | 5   | 11.19       | 1.82  | 0.12 |
| Residual                       | 1223.33        | 199 | 6.15        |       |      |

\*p &lt; .05.

Table A.23. Analysis of variance source table for satisfaction with class add/drop advising assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df  | Mean Square | F      | p    |
|--------------------------------|----------------|-----|-------------|--------|------|
| <b>Main Effects</b>            |                |     |             |        |      |
| Advisor                        | 20.27          | 1   | 20.27       | 3.55   | 0.07 |
| Grade point average            | 49.72          | 2   | 24.86       | 4.36*  | 0.02 |
| <b>2-Way Interaction</b>       |                |     |             |        |      |
| Advisor by grade point average | 62.88          | 2   | 31.44       | 5.51** | 0.01 |
| Explained                      | 121.32         | 5   | 24.27       | 4.25** | 0.01 |
| Residual                       | 970.69         | 170 | 5.71        |        |      |

\*p &lt; .05.

\*\*p &lt; .01.

Table A.24. Analysis of variance source table for satisfaction with curriculum planning assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df  | Mean Square | F       | p    |
|--------------------------------|----------------|-----|-------------|---------|------|
| <b>Main Effects</b>            |                |     |             |         |      |
| Advisor                        | 77.99          | 1   | 77.99       | 11.60** | 0.01 |
| Grade point average            | 11.96          | 2   | 5.98        | 0.89    | 0.42 |
| <b>2-Way Interaction</b>       |                |     |             |         |      |
| Advisor by grade point average | 23.94          | 2   | 11.98       | 1.78    | 0.18 |
| Explained                      | 106.03         | 5   | 21.21       | 3.16**  | 0.01 |
| Residual                       | 1338.37        | 199 | 6.73        |         |      |

\*\*p < .01.

Table A.25. Analysis of variance source table for satisfaction with career guidance assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df | Mean Square | F    | p    |
|--------------------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b>            |                |    |             |      |      |
| Advisor                        | 22.50          | 1  | 22.50       | 3.02 | 0.09 |
| Grade point average            | 25.65          | 2  | 12.83       | 1.72 | 0.19 |
| <b>2-Way Interaction</b>       |                |    |             |      |      |
| Advisor by grade point average | 14.62          | 2  | 7.31        | 0.98 | 0.39 |
| Explained                      | 78.60          | 5  | 15.72       | 2.11 | 0.08 |
| Residual                       | 492.28         | 66 | 7.46        |      |      |

Table A.26. Analysis of variance source table for satisfaction with college rules and procedures assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df | Mean Square | F    | p    |
|--------------------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b>            |                |    |             |      |      |
| Advisor                        | 0.30           | 1  | 0.30        | 0.06 | 0.82 |
| Grade point average            | 0.36           | 2  | 0.18        | 0.04 | 0.97 |
| <b>2-Way Interaction</b>       |                |    |             |      |      |
| Advisor by grade point average | 5.83           | 2  | 2.92        | 0.57 | 0.58 |
| Explained                      | 6.71           | 5  | 1.35        | 0.26 | 0.94 |
| Residual                       | 280.28         | 54 | 5.19        |      |      |

Table A.27. Analysis of variance source table for satisfaction with department rules and procedures assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df  | Mean Square | F    | p    |
|--------------------------------|----------------|-----|-------------|------|------|
| <b>Main Effects</b>            |                |     |             |      |      |
| Advisor                        | 16.05          | 1   | 16.05       | 2.65 | 0.11 |
| Grade point average            | 24.30          | 2   | 12.15       | 2.01 | 0.14 |
| <b>2-Way Interaction</b>       |                |     |             |      |      |
| Advisor by grade point average | 6.25           | 2   | 3.13        | 0.52 | 0.60 |
| Explained                      | 36.67          | 5   | 7.34        | 1.22 | 0.31 |
| Residual                       | 678.09         | 112 | 6.06        |      |      |

Table A.28. Analysis of variance source table for satisfaction with personal counseling advising assistance--advisor by grade point average

| Source of Variation            | Sum of Squares | df | Mean Square | F    | p    |
|--------------------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b>            |                |    |             |      |      |
| Advisor                        | 9.47           | 1  | 9.47        | 1.01 | 0.30 |
| Grade point average            | 8.07           | 2  | 4.03        | 0.47 | 0.63 |
| <b>2-Way Interaction</b>       |                |    |             |      |      |
| Advisor by grade point average | 0.67           | 2  | 0.34        | 0.04 | 0.97 |
| Explained                      | 17.23          | 5  | 3.45        | 0.40 | 0.85 |
| Residual                       | 508.72         | 59 | 8.63        |      |      |

Table A.29. Frequency with which students seek preregistration assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| <25      | Academic advisor            | 122                                     | 56.7 | 60           | 52.2 |
|          | Other advisor               | 94                                      | 43.3 | 55           | 47.8 |
|          |                             | Chi-square = 0.45/p = 0.51 <sup>b</sup> |      |              |      |
| ≥25      | Academic Advisor            | 14                                      | 50.0 | 9            | 34.6 |
|          | Other advisor               | 14                                      | 50.0 | 17           | 65.4 |
|          |                             | Chi-square = 0.76/p = 0.39 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 136                                     |      | 69           |      |
|          | Other advisor               | 108                                     |      | 74           |      |
|          |                             | Chi-square = 1.49/p = 0.22 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.30. Frequency with which students seek class add/drop assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| <25      | Academic advisor            | 104                                     | 49.1 | 49           | 42.2 |
|          | Other advisor               | 108                                     | 50.9 | 67           | 57.8 |
|          |                             | Chi-square = 1.14/p = 0.28 <sup>b</sup> |      |              |      |
| ≥25      | Academic Advisor            | 13                                      | 44.8 | 11           | 42.3 |
|          | Other advisor               | 15                                      | 53.6 | 15           | 57.7 |
|          |                             | Chi-square = 0.01/p = 0.98 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 127                                     |      | 60           |      |
|          | Other advisor               | 123                                     |      | 83           |      |
|          |                             | Chi-square = 1.27/p = 0.27 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.31. Frequency with which students seek curriculum planning assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising | Type of Assigned Advisor                          |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty   |      | Professional |      |
|          |                             | N   | %    | N            | %    |
| <25      | Academic advisor            | 126   | 59.4 | 54           | 47.4 |
|          | Other advisor               | 86  | 40.6 | 60           | 52.6 |
|          |                             | Chi-square = 3.89*/p = 0.05 <sup>b</sup>          |      |              |      |
| ≥25      | Academic Advisor            | 13  | 46.4 | 13           | 50.0 |
|          | Other advisor               | 15  | 53.6 | 13           | 50.0 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup>           |      |              |      |
| Combined | Academic advisor            | 139   |      | 67           |      |
|          | Other advisor               | 101   |      | 73           |      |
|          |                             | Chi-square = (unable to compute chi-square value) |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.



Table A.32. Frequency with which students seek career guidance assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising                       | Type of Assigned Advisor |      |              |      |
|----------|---|--------------------------|------|--------------|------|
|          |   | Faculty                  |      | Professional |      |
|          |   | N                        | %    | N            | %    |
| <25      | Academic advisor                                  | 52                       | 24.6 | 14           | 12.5 |
|          | Other advisor                                     | 159                      | 75.4 | 98           | 87.5 |
|          | Chi-square = 5.91*/p = 0.02b                      |                          |      |              |      |
| >25      | Academic Advisor                                  | 2                        | 7.1  | 4            | 15.4 |
|          | Other advisor                                     | 26                       | 92.9 | 22           | 84.6 |
|          | Chi-square = (unable to compute chi-square value) |                          |      |              |      |
| Combined | Academic advisor                                  | 57                       |      | 18           |      |
|          | Other advisor                                     | 185                      |      | 120          |      |
|          | Chi-square = 4.57*/p = 0.04b                      |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

Table A.33. Frequency with which students seek college rules and procedures assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising                       | Type of Assigned Advisor |      |              |       |
|----------|---|--------------------------|------|--------------|-------|
|          |   | Faculty                  |      | Professional |       |
|          |   | N                        | %    | N            | %     |
| <25      | Academic advisor                                  | 36                       | 17.4 | 20           | 18.2  |
|          | Other advisor                                     | 171                      | 82.6 | 90           | 81.8  |
|          | Chi-square (1) = 0.01/p = 0.98 <sup>b</sup>       |                          |      |              |       |
| >25      | Academic Advisor                                  | 4                        | 14.3 | 0            | 0.0   |
|          | Other advisor                                     | 24                       | 85.7 | 26           | 100.0 |
|          | Chi-square = (unable to compute chi-square value) |                          |      |              |       |
| Combined | Academic advisor                                  | 40                       |      | 20           |       |
|          | Other advisor                                     | 195                      |      | 116          |       |
|          | Chi-square = 0.20/p = 0.67 <sup>b</sup>           |                          |      |              |       |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.34. Frequency with which students seek department rules and procedures assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising             | Type of Assigned Advisor |      |              |      |
|----------|---|--------------------------|------|--------------|------|
|          |   | Faculty                  |      | Professional |      |
|          |   | N                        | %    | N            | %    |
| <25      | Academic advisor                        | 69                       | 33.3 | 40           | 36.0 |
|          | Other advisor                           | 138                      | 66.7 | 71           | 64.0 |
|          | Chi-square = 0.13/p = 0.72 <sup>b</sup> |                          |      |              |      |
| ≥25      | Academic Advisor                        | 7                        | 25.0 | 3            | 11.5 |
|          | Other advisor                           | 21                       | 75.0 | 23           | 88.5 |
|          | Chi-square = 0.85/p = 0.36 <sup>b</sup> |                          |      |              |      |
| Combined | Academic advisor                        | 76                       |      | 43           |      |
|          | Other advisor                           | 159                      |      | 94           |      |
|          | Chi-square = 0.01/p = 0.95 <sup>b</sup> |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.35. Frequency with which students seek personal counseling assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student age

| Age      | Source of Assigned Advising                       | Type of Assigned Advisor |      |              |      |
|----------|---|--------------------------|------|--------------|------|
|          |   | Faculty                  |      | Professional |      |
|          |   | N                        | %    | N            | %    |
| <25      | Academic advisor                                  | 45                       | 22.0 | 12           | 11.2 |
|          | Other advisor                                     | 160                      | 78.0 | 95           | 88.8 |
|          | Chi-square = 4.73*/p = 0.03 <sup>b</sup>          |                          |      |              |      |
| ≥25      | Academic Advisor                                  | 7                        | 25.9 | 1            | 4.0  |
|          | Other advisor                                     | 20                       | 74.1 | 24           | 96.0 |
|          | Chi-square = (unable to compute chi-square value) |                          |      |              |      |
| Combined | Academic advisor                                  | 52                       |      | 13           |      |
|          | Other advisor                                     | 180                      |      | 119          |      |
|          | Chi-square = 8.22**/p = 0.01 <sup>b</sup>         |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the age variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

\*\*p < .01.

Table A.36. Analysis of variance source table for satisfaction with preregistration advising assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df  | Mean Square | F     | p    |
|---------------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b>       |                |     |             |       |      |
| Assigned advisor          | 30.55          | 1   | 30.55       | 4.96* | 0.03 |
| Age                       | 4.24           | 1   | 4.24        | 0.69  | 0.41 |
| <b>2-Way Interactions</b> |                |     |             |       |      |
| Assigned advisor by age   | 5.37           | 1   | 5.37        | 0.88  | 0.36 |
| Explained                 | 41.14          | 3   | 13.72       | 2.23  | 0.09 |
| Residual                  | 1238.11        | 201 | 6.16        |       |      |

\*p &lt; .05.

Table A.37. Analysis of variance source table for satisfaction with class add/drop advising assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df  | Mean Square | F    | p    |
|---------------------------|----------------|-----|-------------|------|------|
| <b>Main Effects</b>       |                |     |             |      |      |
| Assigned advisor          | 9.24           | 1   | 9.24        | 1.48 | 0.23 |
| Age                       | 0.95           | 1   | 0.95        | 0.15 | 0.70 |
| <b>2-Way Interactions</b> |                |     |             |      |      |
| Assigned advisor by age   | 3.13           | 1   | 3.13        | 0.50 | 0.49 |
| Explained                 | 12.79          | 3   | 4.27        | 0.68 | 0.57 |
| Residual                  | 1079.21        | 172 | 6.28        |      |      |

Table A.38. Analysis of variance source table for satisfaction with curriculum planning assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df  | Mean Square | F       | p    |
|---------------------------|----------------|-----|-------------|---------|------|
| <b>Main Effects</b>       |                |     |             |         |      |
| Assigned Advisor          | 68.94          | 1   | 68.94       | 10.12** | 0.01 |
| Age                       | 0.01           | 1   | 0.01        | 0.01    | 0.98 |
| <b>2-Way Interactions</b> |                |     |             |         |      |
| Assigned advisor by age   | 5.28           | 1   | 5.28        | 0.77    | 0.39 |
| Explained                 | 75.38          | 3   | 25.12       | 3.69*   | 0.02 |
| Residual                  | 1369.02        | 204 | 6.82        |         |      |

\*p &lt; .05.

\*\*p &lt; .01.

Table A.39. Analysis of variance source table for satisfaction with career guidance assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df | Mean Square | F     | p    |
|---------------------------|----------------|----|-------------|-------|------|
| <b>Main Effects</b>       |                |    |             |       |      |
| Assigned advisor          | 36.62          | 1  | 36.62       | 4.70* | 0.04 |
| Age                       | 0.19           | 1  | 0.19        | 0.03  | 0.88 |
| <b>2-Way Interactions</b> |                |    |             |       |      |
| Assigned advisor by age   | 2.45           | 1  | 2.45        | 0.32  | 0.58 |
| Explained                 | 40.97          | 3  | 13.66       | 1.76  | 0.17 |
| Residual                  | 529.91         | 68 | 7.78        |       |      |

\*p &lt; .05.

Table A.40. Analysis of variance source table for satisfaction with college rules and procedures assistance--assigned advisor by age

| Source of Variation | Sum of Squares | df | Mean Square | F   | p |
|---------------------|----------------|----|-------------|-----|---|
| <b>Main Effects</b> |                |    |             |     |   |
| Assigned advisor    | 0.52           | 1  | 0.52        | *** |   |
| Age                 | 0.00           | 1  | 0.00        | *** |   |
| Explained           | 0.54           | 2  | 0.27        | *** |   |
| Residual            | 286.45         | 57 | 5.03        |     |   |

\*\*\*Unable to compute F value due to unequal cell size.

Table A.41. Analysis of variance source table for satisfaction with department rules and procedures assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df  | Mean Square | F    | p    |
|---------------------------|----------------|-----|-------------|------|------|
| <b>Main Effects</b>       |                |     |             |      |      |
| Assigned advisor          | 6.93           | 1   | 6.93        | 1.14 | 0.29 |
| Age                       | 15.19          | 1   | 15.19       | 2.50 | 0.12 |
| <b>2-Way Interactions</b> |                |     |             |      |      |
| Assigned advisor by age   | 0.16           | 1   | 0.16        | 0.03 | 0.88 |
| Explained                 | 21.47          | 3   | 7.16        | 1.18 | 0.33 |
| Residual                  | 693.29         | 114 | 6.09        |      |      |

Table A.42. Analysis of variance source table for satisfaction with personal counseling advising assistance--assigned advisor by age

| Source of Variation       | Sum of Squares | df | Mean Square | F     | p    |
|---------------------------|----------------|----|-------------|-------|------|
| <b>Main Effects</b>       |                |    |             |       |      |
| Assigned advisor          | 10.90          | 1  | 10.90       | 1.42  | 0.24 |
| Age                       | 31.33          | 1  | 31.31       | 4.07* | 0.05 |
| <b>2-Way Interactions</b> |                |    |             |       |      |
| Assigned advisor by age   | 16.62          | 1  | 16.62       | 2.16  | 0.15 |
| Explained                 | 56.44          | 3  | 18.82       | 2.45  | 0.08 |
| Residual                  | 469.51         | 61 | 7.70        |       |      |

\*p < .05.



Table A.43. Frequency with which students seek preregistration assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender   | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| Male     | Academic advisor            | 123                                     | 55.9 | 65           | 49.6 |
|          | Other advisor               | 97                                      | 44.1 | 66           | 50.4 |
|          |                             | Chi-square = 1.07/p = 0.31 <sup>b</sup> |      |              |      |
| Female   | Academic Advisor            | 15                                      | 57.7 | 4            | 40.0 |
|          | Other advisor               | 11                                      | 42.3 | 6            | 60.0 |
|          |                             | Chi-square = 0.34/p = 0.57 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 138                                     |      | 69           |      |
|          | Other advisor               | 108                                     |      | 72           |      |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.44. Frequency with which student seek class add/drop assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender   | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| Male     | Academic advisor            | 107                                     | 49.8 | 57           | 43.2 |
|          | Other advisor               | 108                                     | 50.2 | 45           | 56.8 |
|          |                             | Chi-square = 1.18/p = 0.28 <sup>b</sup> |      |              |      |
| Female   | Academic Advisor            | 10                                      | 40.0 | 3            | 30.0 |
|          | Other advisor               | 15                                      | 60.0 | 7            | 70.0 |
|          |                             | Chi-square = 0.03/p = 0.87 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 117                                     |      | 60           |      |
|          | Other advisor               | 123                                     |      | 52           |      |
|          |                             | Chi-square = 0.94/p = 0.34 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.45. Frequency with which students seek curriculum planning assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender   | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| Male     | Academic advisor            | 122                                     | 56.7 | 64           | 49.2 |
|          | Other advisor               | 93                                      | 43.3 | 66           | 50.8 |
|          |                             | Chi-square = 1.56/p = 0.22 <sup>b</sup> |      |              |      |
| Female   | Academic Advisor            | 17                                      | 68.0 | 3            | 30.0 |
|          | Other advisor               | 8                                       | 32.0 | 7            | 70.0 |
|          |                             | Chi-square = 2.81/p = 0.10 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 139                                     |      | 67           |      |
|          | Other advisor               | 101                                     |      | 73           |      |
|          |                             | Chi-square = 0.04/p = 0.86 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.46. Frequency with which students seek career guidance assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender  | Source of Assigned Advising | Type of Assigned Advisor |      |              |      |
|---|-----------------------------|--------------------------|------|--------------|------|
|   |                             | Faculty                  |      | Professional |      |
|   |                             | N                        | %    | N            | %    |
| Male  | Academic advisor            | 49                       | 22.8 | 17           | 13.3 |
|   | Other advisor               | 166                      | 77.2 | 111          | 86.7 |
| Chi-square = 4.08*/p = 0.05 <sup>b</sup>          |                             |                          |      |              |      |
| Female  | Academic Advisor            | 5                        | 20.8 | 1            | 10.0 |
|   | Other advisor               | 19                       | 79.2 | 9            | 90.0 |
| Chi-square = (unable to compute chi-square value) |                             |                          |      |              |      |
| Combined  | Academic advisor            | 54                       |      | 18           |      |
|   | Other advisor               | 185                      |      | 120          |      |
| Chi-square = 0.00/p = 1.00 <sup>b</sup>           |                             |                          |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*p < .05.

Table A.47. Frequency with which students seek college rules and procedures assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender   | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| Male     | Academic advisor            | 34                                      | 16.2 | 17           | 13.5 |
|          | Other advisor               | 176                                     | 83.8 | 109          | 86.5 |
|          |                             | Chi-square = 0.27/p = 0.61 <sup>b</sup> |      |              |      |
| Female   | Academic Advisor            | 6                                       | 24.0 | 3            | 30.0 |
|          | Other advisor               | 19                                      | 76.0 | 7            | 70.0 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 40                                      |      | 20           |      |
|          | Other advisor               | 105                                     |      | 116          |      |
|          |                             | Chi-square = 1.88/p = 0.18 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.48. Frequency with which students seek department rules and procedures assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender   | Source of Assigned Advising | Type of Assigned Advisor                |      |              |      |
|----------|-----------------------------|---|------|--------------|------|
|          |                             | Faculty                                 |      | Professional |      |
|          |                             | N                                       | %    | N            | %    |
| Male     | Academic advisor            | 67                                      | 31.9 | 40           | 31.5 |
|          | Other advisor               | 143                                     | 68.1 | 87           | 68.5 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup> |      |              |      |
| Female   | Academic Advisor            | 9                                       | 36.0 | 3            | 30.0 |
|          | Other advisor               | 16                                      | 64.0 | 7            | 70.0 |
|          |                             | Chi-square = 0.00/p = 1.00 <sup>b</sup> |      |              |      |
| Combined | Academic advisor            | 76                                      |      | 43           |      |
|          | Other advisor               | 159                                     |      | 94           |      |
|          |                             | Chi-square = 0.02/p = 0.91 <sup>b</sup> |      |              |      |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

Table A.49. Frequency with which students seek personal counseling assistance from their assigned advisor vs. other sources<sup>a</sup> as a function of two types of assigned advisor and student gender

| Gender  | Source of Assigned Advising | Type of Assigned Advisor |      |              |       |
|---|-----------------------------|--------------------------|------|--------------|-------|
|   |                             | Faculty                  |      | Professional |       |
|   |                             | N                        | %    | N            | %     |
| Male  | Academic advisor            | 48                       | 23.2 | 13           | 10.7  |
|   | Other advisor               | 159                      | 76.8 | 109          | 89.3  |
| Chi-square = 7.18**/p = 0.01 <sup>b</sup>         |                             |                          |      |              |       |
| Female  | Academic Advisor            | 4                        | 16.0 | 0            | 0.0   |
|   | Other advisor               | 21                       | 84.0 | 10           | 100.0 |
| Chi-square = (unable to compute chi-square value) |                             |                          |      |              |       |
| Combined  | Academic advisor            | 52                       |      | 13           |       |
|   | Other advisor               | 180                      |      | 119          |       |
| Chi-square = 0.66/p = 0.42 <sup>b</sup>           |                             |                          |      |              |       |

<sup>a</sup>All other Advising sources (including No Advising received).

<sup>b</sup>Chi-square values are presented for each level of the gender variable and for the levels combined. Analyses compared students assigned to the two types of advisors in terms of the frequency with which they used their assigned advisor versus other sources.

\*\*p < .01.

Table A.50. Analysis of variance source table for satisfaction with preregistration advising assistance--advisor by gender

| Source of Variation       | Sum of Squares | df  | Mean Square | F     | p    |
|---------------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b>       |                |     |             |       |      |
| Advisor                   | 30.25          | 1   | 30.25       | 4.90* | 0.03 |
| Gender                    | 1.81           | 1   | 1.81        | 0.30  | 0.60 |
| <b>2-Way Interactions</b> |                |     |             |       |      |
| Advisor by gender         | 3.07           | 1   | 3.07        | 0.50  | 0.49 |
| Explained                 | 36.41          | 3   | 12.14       | 1.97  | 0.13 |
| Residual                  | 1242.24        | 204 | 6.28        |       |      |

\*p &lt; .05.

Table A.51. Analysis of variance source table for satisfaction with class add/drop advising assistance--advisor by gender

| Source of Variation       | Sum of Squares | df  | Mean Square | F     | p    |
|---------------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b>       |                |     |             |       |      |
| Advisor                   | 6.90           | 1   | 6.90        | 1.13  | 0.29 |
| Gender                    | 26.60          | 1   | 26.60       | 4.34* | 0.04 |
| <b>2-Way Interactions</b> |                |     |             |       |      |
| Advisor by gender         | 2.23           | 1   | 2.23        | 0.37  | 0.55 |
| Explained                 | 37.56          | 3   | 12.52       | 2.05  | 0.11 |
| Residual                  | 1054.45        | 172 | 6.14        |       |      |

\*p &lt; .05.



Table A.52. Analysis of variance source table for satisfaction with curriculum planning assistance--advisor by gender

| Source of Variation       | Sum of Squares | df  | Mean Square | F      | p    |
|---------------------------|----------------|-----|-------------|--------|------|
| <b>Main Effects</b>       |                |     |             |        |      |
| Advisor                   | 63.21          | 1   | 63.21       | 9.34** | 0.01 |
| Gender                    | 8.45           | 1   | 8.45        | 1.25   | 0.27 |
| <b>2-Way Interactions</b> |                |     |             |        |      |
| Advisor by gender         | 4.84           | 1   | 4.84        | 0.72   | 0.40 |
| Explained                 | 83.42          | 3   | 27.81       | 4.11** | 0.01 |
| Residual                  | 1360.98        | 201 | 6.78        |        |      |

\*\*p &lt; .01.

Table A.53. Analysis of variance source table for satisfaction with career guidance assistance--advisor by gender

| Source of Variation       | Sum of Squares | df | Mean Square | F     | p    |
|---------------------------|----------------|----|-------------|-------|------|
| <b>Main Effects</b>       |                |    |             |       |      |
| Advisor                   | 35.24          | 1  | 35.24       | 4.69* | 0.04 |
| Gender                    | 17.91          | 1  | 17.91       | 2.38  | 0.13 |
| <b>2-Way Interactions</b> |                |    |             |       |      |
| Advisor by gender         | 2.94           | 1  | 2.94        | 0.39  | 0.54 |
| Explained                 | 59.19          | 3  | 19.73       | 2.63  | 0.06 |
| Residual                  | 511.70         | 68 | 7.53        |       |      |

\*p &lt; .05.

Table A.54. Analysis of variance source table for satisfaction with college rules and procedures assistance--advisor by gender

| Source of Variation       | Sum of Squares | df | Mean Square | F    | p    |
|---------------------------|----------------|----|-------------|------|------|
| <b>Main Effects</b>       |                |    |             |      |      |
| Advisor                   | 0.54           | 1  | 0.54        | 0.11 | 0.75 |
| Gender                    | 1.75           | 1  | 1.75        | 0.37 | 0.56 |
| <b>2-Way Interactions</b> |                |    |             |      |      |
| Advisor by gender         | 14.32          | 1  | 14.32       | 2.97 | 0.10 |
| Explained                 | 16.60          | 3  | 5.54        | 1.15 | 0.34 |
| Residual                  | 270.40         | 56 | 4.84        |      |      |

Table A.55. Analysis of variance source table for satisfaction with department rules and procedures assistance--advisor by gender

| Source of Variation       | Sum of Squares | df  | Mean Square | F     | p    |
|---------------------------|----------------|-----|-------------|-------|------|
| <b>Main Effects</b>       |                |     |             |       |      |
| Advisor                   | 5.26           | 1   | 5.26        | 0.88  | 0.35 |
| Gender                    | 4.82           | 1   | 4.82        | 0.81  | 0.38 |
| <b>2-Way Interactions</b> |                |     |             |       |      |
| Advisor by gender         | 23.68          | 1   | 23.68       | 3.97* | 0.05 |
| Explained                 | 34.62          | 3   | 11.54       | 1.94  | 0.13 |
| Residual                  | 680.14         | 114 | 5.97        |       |      |

\*p &lt; .05.

Table A.56. Analysis of variance source table for satisfaction with personal counseling advising assistance--advisor by gender

| Source of Variation | Sum of Squares | df | Mean Square | F   | p |
|---------------------|----------------|----|-------------|-----|---|
| Main Effects        |                |    |             |     |   |
| Advisor             | 9.91           | 1  | 9.91        | *** |   |
| Gender              | 4.01           | 1  | 4.01        | *** |   |
| Explained           | 12.51          | 2  | 6.26        | *** |   |
| Residual            | 513.44         | 62 | 8.29        |     |   |

\*\*\*Unable to compute F value due to unequal cell size.

APPENDIX B. STUDENT SURVEY

IOWA STATE UNIVERSITY  
OF SCIENCE AND TECHNOLOGY  
ENGINEERING EDUCATION PROJECTS OFFICE

The Engineering Education Projects Committee of the College of Engineering is asking your help to determine student understanding and attitudes concerning various advising services provided by your Department, College and University. The following questionnaire has been designed with this in mind and your considered response to the questions will be appreciated. A summary of the results will be made available to the Engineering Council, the Iowa Engineer, and interested student organizations.

Instructions: Specific directions are given for completing many of the questions in this questionnaire. Where no directions are given, please black out the circle on the answer sheet of the number or letter of the most single appropriate response.

PART I

1. What is your major?
  - A. Aerospace Engineering
  - B. Agricultural Engineering
  - C. Materials Science (Ceramic and Metallurgical Engineering)
  - D. Chemical Engineering
  - E. Civil/Construction/Surveying Engineering
  - F. Computer/Electrical Engineering
  - G. Engineering Science
  - H. Industrial Engineering/Engineering Operations
  - I. Mechanical Engineering
  - J. Nuclear Engineering
  
2. What is your sex?
  - A. Male
  - B. Female
  
3. What is your residency status?
  - A. In-state/U.S. Citizen
  - B. Out of state/U.S. Citizen
  - C. International Student/Non-citizen
  - D. U.S.P.R. - United States Permanent Resident/Non-citizen
  
4. What is your cumulative grade point average at ISU?
  - A. 3.6 to 4.0
  - B. 3.2 to 3.59
  - C. 2.8 to 3.19
  - D. 2.4 to 2.79
  - E. 2.0 to 2.39

5. What is your age?
  - A. Under 25
  - B. 25 or older
  
6. Do you feel that you have a permanent handicap?
  - A. No
  - B. Yes, restricted mobility
  - C. Yes, restricted hearing
  - D. Yes, restricted vision
  - E. Yes, other
  
7. What is your ethnic background?
  - A. American Indian or Alaskan Native
  - B. Asian, Pacific Islander, or Filipino
  - C. Hispanic, Chicano, or Spanish-speaking American
  - D. White or Caucasian
  - E. Black or Afro-American
  - F. Other
  
8. When did you enter Iowa State University
  - A. Entered SS 80 or F 80
  - B. Entered SP 81
  - C. Entered SS 81 or F 81
  - D. Entered SP 82
  - E. Entered SS 82 or F 82
  - F. Entered SP 83
  - G. Entered SS 83 or F 83
  - H. Entered SP 84
  - I. Entered SS 84 or F 84
  - J. None of the above
  
9. Did you enter Iowa State University in the engineering college?
  - A. Yes
  - B. No
  
10. Did you enter Iowa State University as an undeclared engineering student?
  - A. Yes
  - B. No
  
11. Did you enter Iowa State University in the department you are graduating?
  - A. Yes
  - B. No

12. Did you attend summer orientation before attending ISU? If yes, how would you rate this experience?

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent

13. Did you take math placement exams when arriving at ISU? If yes, proceed to 14, otherwise 15.

A. Yes  
 B. No

14. Do you feel you were accurately placed in math classes as a freshman?

A. Yes  
 B. No

15. Did you take English placement exams when arriving at ISU? If yes, proceed to 16, otherwise 17.

A. Yes  
 B. No

16. Do you feel you were accurately placed in English?

A. Yes  
 B. No

17. Did you take Freshman Engineering 101 as a freshman? If yes, proceed to 18, otherwise 20.

A. Yes  
 B. No

18. Please rate the advising portion of this course (FR E 101).

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent

19. Please rate the career orientation portion of this course (FR E 101).

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent

20. Since being in your professional department, have you attended an advising/career seminar type of class? If yes, proceed to 21, otherwise 22.

A. Yes  
 B. No

21. Please rate these class/classes as to their value to you.

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent

22. Reflecting on your entire academic career as an engineer, rate the "OVERALL" advising system you experienced.

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent

Comments:

## PART II

Listed below are services provided by the University. Where did you obtain this information or service? Mark your PRIMARY SOURCE of assistance for each item as follows:

- Mark A Academic Advisor  
 B Other Faculty Member  
 C Peer  
 D Advising Classes/Seminar  
 E Student Services  
 F Engineering Classification  
 G Engineering Placement  
 H Clerical Staff  
 I Other  
 J No assistance received

Then rate the quality of the assistance as follows:

Quality of Assistance

1 2 3 4 5 6 7 8 9 10  
 Poor Excellent



23. Preregistration (Mark A through J indicating primary source of assistance).
24. Quality of preregistration assistance Mark 1 (Poor) through 10 (Excellent) .
25. Class Add/Drops (Mark A through J).
26. Quality of (Add/Drops) assistance (Mark 1 through 10).
27. Curriculum Planning (Mark A-J).
28. Quality of (Curriculum Planning) assistance (Mark 1-10).
29. Career Guidance (Mark A-J).
30. Quality of (Career Guidance) assistance (Mark 1-10).
31. Referral Information (Mark A-J).
32. Quality of (Referral Information) assistance (Mark 1-10).
33. University Rules & Procedures (Mark A-J).
34. Quality of (University Rules & Procedures) assistance (Mark 1-10).
35. College Rules & Procedures (Mark A-J).
36. Quality of (College Rules & Procedures) assistance (Mark 1-10).
37. Department Rules & Procedures (Mark A-J).
38. Quality of (Department Rules & Procedures) assistance (Mark 1-10).
39. Professional Clubs/Organizations, Opprotunities (Mark A-J).
40. Quality of (Professional Clubs) assistance (Mark 1-10).
41. Summer/Part-Time Job Opportunities (Mark A-J).
42. Quality of (Job Opportunities) assistance (Mark 1-10).
43. Personal Counseling (Mark A-J).
44. Quality of (Personal Counseling) assistance (Mark 1-10).
45. Professional Exams (Example: EIT) (Mark A-J).
46. Quality of (Professional Exams) assistance (Mark 1-10).
47. Financial Aids (Mark A-J).
48. Quality of (Financial Aids) assistance (Mark 1-10).
49. Resume Preparation/Interviewing (Mark A-J).
50. Quality of (Resume Preparation/Interviewing) assistance (Mark 1-10).
51. Permanent Job (Mark A-J).
52. Quality of (Permanent Job) assistance (Mark 1-10).