

ACT SURVEY OF ACADEMIC ADVISING: ASSESSMENT
OF THE PSYCHOMETRIC PROPERTIES AND
DEVELOPMENT OF A SHORT FORM

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CHAPTER I

INTRODUCTION

Introduction

College academic advisors serve students in many ways. The role of an academic advisor ranges from freshman orientation instructor to career counselor. The quality of academic advising is vital to the survival of any post-secondary institution. Academic advising is closely linked to retention and student satisfaction (Hoeft, 1994). Due to the importance of this institutional function, evaluation of academic advising systems should be conducted. American College Testing markets and sells a series of satisfaction surveys titled the ACT Evaluation/Survey Service. Included in this series of surveys is the *ACT Survey of Academic Advising* (ACT-SAA). This survey is designed to measure student satisfaction with the advisement system. The purpose of this study is to assess the psychometric properties of the *ACT-SAA* and to develop a short form of the ACT instrument.

Evaluation of Academic Advisement.

As higher education becomes more expensive, students are finding it necessary to be even more efficient during their time in college. The role of the academic advisor is to work with the student on an individual basis to select courses and educational experiences which will best prepare the student for the years after graduation. According to Hoeft

(1994) academic advising has been found to be inextricably intertwined with student retention in that students need graduation and career advisement, while institutional needs include enrollment and retention of students. Meeting the needs of both students and institutions requires a superior quality of academic advisement. With so much depending on the delivery of good academic advisement, it seems only logical to conduct a periodic evaluation of the academic advising system.

Illustrative Examples.

The following examples illustrate the variety of instruments used in the academic advising process. Hanson and Raney (1993) conducted a study to evaluate the advising system at a large university system. The broadness of this study helped to establish the importance and usefulness of the evaluation of academic advisement. The goal of the study was to provide both summative and formative evaluative information. Hanson and Raney (1993) focused on five evaluation questions in this instrument. The questions to be answered were: “Who seeks academic advising?”, “Who delivers academic advising?”, “What is the advising process that students experience?”, “How satisfied are students with their advising?”, and “Does the academic advising system meet students’ needs?” In addition to these five questions as part of their focus, information was broken down into four categories: assignment, scheduling, content, and resources. This evaluation instrument yielded both quantitative and qualitative data. Scaled opinion (using a Likert scale), demographic, and open ended questions were asked. According to Hanson and Raney, this evaluation survey provided important insights into how and when students seek advising assistance. Based on their study, Hanson and Raney concluded that their

instrument yielded data useful in the evaluation of the academic advising process and that such an evaluation is a complex and necessary process.

Dunker and Belcastro (1994) provide a good example of how an evaluation of academic advisement might be used. They examined the difference in student satisfaction between full-time and part-time students. Out of a random sample of 750 students, 398 participated, including full-time and part-time students from several campuses of an urban community college. A 25-item questionnaire, nine demographic questions and 16 evaluation questions were used to measure satisfaction with the academic advising system. Similar to the *ACT-SAA*, the evaluation questions used a five-point Likert scale for level of satisfaction with overall advising, the frequency and length of advising meetings, and the ease of making appointments. Unlike the *ACT-SAA*, this instrument was designed for specific use at the research site. Additionally, content validity was studied at the site of this particular research project. Differences were identified between full-time and part-time students, and there was a positive correlation between the number of times a student met with their advisor and their overall satisfaction with the advisement system.

These evaluations of academic advisement are two examples of how post-secondary institutions might administer and make inferences from a survey which focuses on the delivery of academic advising. Knowledge gained from the results of such surveys can be useful in the planning and subsequent delivery of advising services.

ACT Survey of Academic Advising.

Instrument. As mentioned previously, American College Testing publishes and markets a series of evaluation instruments called the ACT Evaluation Survey Services. Included in this series of services are a variety of instruments to measure different attitudes that may be of interest to administrators in higher education. Examples of the surveys offered include the following: Adult Learner Needs Assessment Survey, Alumni Survey, Entering Student Survey, Student Opinion Survey, and the Survey of Academic Advising. ACT advertises these instruments as valuable aids in providing data which can be helpful in the planning and implementation of student services, alumni services, and curriculum development (ACT, 1996/97).

Scales. The Survey of Academic Advising (SAA) is composed of seven separate sections. According to Mittelholtz and Noble (1993), this measure obtains students' impressions of their institutions' academic advising services. It should be noted that this instrument is only to be used to measure student opinion about academic advising. Its stated purpose does not include evaluation of personal or career counseling services. Mittelholtz and Noble describe the purpose of each of the seven sections as follows. Section I contains simple biographical questions. Section II is composed of questions to identify the advisor, while Section III questions advising needs and assesses students' satisfaction regarding these needs. Completion of section IV requires the students to rate their level of agreement with 36 statements about their advisor. Section IV asks students to rate such statements as "My advisor knows who I am" and "My advisor allows sufficient time to discuss issues or problems". Section V requests information regarding the frequency and length of visits to the advisor. Sections VI and VII complete the

instrument by allowing space for additional questions specific to the institution and a space for comments and suggestions from the students.

Psychometric Properties. Mittelholtz and Noble (1993) examined the validity of each instrument offered by the ACT Evaluation and Survey Services. Their study was conducted at several institutions to determine the degree to which a particular survey could help the institution improve its services. Previous studies were cited supporting the ability of the surveys to serve as instruments for eliciting the perceptions of students concerning institutional programs, services, and the general environment. The studies cited did not, however, include validity studies of the SAA. The research conducted by Mittelholtz and Noble (1993) examined the ability of the instruments to measure and reflect a change in student perceptions which can be correlated to changes made by the institution in programs, services, and/or environment. The study was conducted based on theory that an instrument yielding results valid for such research will reflect a change in student perception which is related according to changes in services. The study identified some student characteristics that might influence some survey items. These characteristics included age, race, sex, college GPA, and purpose for attending the institution. Mittelholtz and Noble asked personnel at the institutions to identify items where they anticipated change. Of the 23 items identified for expected change, responses to 18 changed in the predicted direction. Responses to three of the remaining items changed in the opposite direction and the other two items maintained identical means for both administrations of the survey. It was concluded that 75 percent of the predicted changes were supported by the student response data. Mittelholtz and Noble concluded that while the responses the

the ACT-SAA items appeared to be related to changes in the advising program, the results of this study were based only on the responses of two institutions and may not generalize to all ACT-SAA user institutions. The lack of conclusiveness in this study would indicate a need for further assessment of the psychometric properties of the *ACT-SAA*.

Example of use. Stolar (1996) conducted a study using the *ACT-SAA*. The purpose of this study was to gather information to determine restructuring needs and changes in the delivery of services. Stolar outlined an evaluation conducted at Cumberland Community College in New Jersey. The *ACT-SAA* was used to examine students' satisfaction levels with the current advising system. Responses were gathered from 36 percent of the undergraduate degree seeking students, a total of 667 students for that particular term. The differences in satisfaction rates across the curriculums were also examined. Humanities, Math, Science, Social Studies, and Technology majors were all compared regarding the satisfaction rates of academic advising.

This is just one published example of how the *ACT-SAA* can be useful. This evaluation instrument has been developed for the purpose of providing feedback. The developers of this instrument claim it allows institutions to identify their constituency as well as the overall satisfaction rate of advisees. This researcher believes all types of post-secondary institutions might in some way benefit from valid feedback through which students' advising needs along with possible ensuing actions answering those needs are identified.

Concerns.

There are a few issues an evaluator might consider when deciding to use this instrument. Upon review of the data available, technical characteristics of this instrument appear to have been thoroughly investigated. However, this thoroughness is based on the reliability and validity studies conducted by ACT or those associated with ACT. The degree to which professional advisors (experts) find this instrument to be complete. The length, however, might be a detriment. In the Spring of 1997 the ACT-SAA was administered to students in one of the academic colleges in a large midwestern land-grant university as part of an evaluation of the college's centralized academic advisement system. Based on the experience of this researcher, the greatest obstacle to gathering data was the time necessary to complete the questionnaire. Students typically spent 10 to 15 minutes completing the questionnaire. A shorter version of this instrument has the potential to be extremely beneficial. What is lost in thoroughness may be gained through greater student representation as a result of increased students' willingness to complete the survey.

The second issue that should be addressed is the lack of outside research conducted to investigate this instrument. Most of the literature found which directly addresses the *ACT-SAA* is written and published by ACT, a respected non-profit organization. However, the possibility of researcher bias cannot be eliminated until an outside researcher assesses the validity and reliability of this instrument.

As universities and colleges become more dependent on enrollment for funding, it is important for these post-secondary institutions to provide quality advisement services. Evaluation of academic advising services can provide valuable information for faculty and

advising units. Improvement of services as a result of feedback points to justification of evaluation and the use of survey instruments such as the *ACT-SAA*.

Statement of the Problem

The *ACT-SAA* is a widely used instrument. According to ACT (1996/97), the normative summary report provided by ACT is based on 36,358 records obtained from 87 colleges that administered the *ACT-SAA*. The colleges represented in the report include large and small, public and private; technical, 2-year, and 4-year institutions from 29 states. This report illustrates the widespread use and diversity among the institutions that use the *ACT-SAA*. This widespread use supports the need for outside assessment of the psychometric properties of this instrument. According to ACT this instrument is thorough and provides excellent feedback to academic advising units. The potential widespread usefulness of the instrument is reflected by the diversity and number of institutions using the instrument. Due to this potential widespread usefulness, there are a few key features that need to be addressed.

A clear identification of selected psychometric properties of the *ACT-SAA* would benefit users. This instrument contains over 50 items, some with more than one part. Administrators using the results of such a survey should be able to look at the results and clearly see the strengths and weaknesses in their advisement program. Currently, the results of conducting a survey and using this instrument provides information on each item individually.

This instrument should undergo an external assessment of validity and reliability since nearly all of the research conducted to measure validity and reliability of this

instrument was conducted by associates of ACT. In order to enhance the quality of data collected, it is important to users of this survey that such a complex instrument undergo an external review regarding these properties.

There also appears to be a need to create a short form of this instrument. The previously mentioned survey conducted by the researcher of this study at the midwestern land-grant university shows that data collection can be a problem when using such a long form. An assessment of selected psychometric properties of the *ACT-SAA* will provide the information necessary to develop a short form.

Purpose of the Study

The purposes of this study are: (1) to assess selected psychometric properties of the *ACT-SAA*; and (2) to develop a short form of the *ACT-SAA*. The psychometric properties selected to be measured are internal consistency reliability, content validity, and construct validity. Internal consistency will be tested to see if the items are homogeneous using Cronbach's alpha estimate of reliability. A factor analysis will be used to assess construct validity. Content validity will be further tested by this research through expert judgement. Through factor analysis, the researcher will determine which questions contribute the most to factors identified in this study. Therefore this information will be used to determine which questions to use in the short form. As a result, the information from the assessment of selected psychometric properties of the *ACT-SAA* will be used by the researcher to develop a short form. The new short form will be a similar instrument to accomplish the same purpose of providing feedback to administrators and advisors to use

in planning and delivering advising services. The variables of interest in this study are the items in the six sections of the *ACT-SAA*.

Definition of Terms

The following definitions of terms will be used in this study.

Academic advisement - Advisement which takes place at the post-secondary educational level. The function of academic advisement is to guide students regarding enrollment procedures, choice of classes, degree requirements, career options, study skills, extracurricular experiences, career placement, and scholarship information. Additionally academic advisors also serve as a referral to other student support services.

ACT Survey of Academic Advising - Referred to in this report as the ACT-SAA it is a survey instrument developed, published, and marketed by American College Testing. This instrument is designed to be used in the evaluation of academic advising units in most post-secondary settings (ACT, 1996/97).

Construct validity - The evidence classed in the construct-related category focuses primarily on the test scores as a measure of the psychological characteristic of interest. Such characteristics are referred to as constructs because they are theoretical constructions about the nature of human behavior (Popham, 1990).

Content validity - In general, content-related evidence [of validity] demonstrates the degree to which the sample of items, tasks, or questions on a test are representative of some defined universe or domain of content (Popham, 1990).

Internal consistency reliability - A form of reliability focusing on the consistency of a test's internal elements, namely, its test items (Popham, 1990).

Significance of the Study

The significance of this study relates to three areas. First, this study provides external assessment of selected types of validity and reliability of this instrument. This will be useful for anyone planning to use this instrument as an evaluation tool. This is also significant since there are very few outside reviewers of this instrument and the instrument is so widely used. The second significant contribution to be made by this study is the identification of the constructs being measured by the instrument. This identification of the constructs of the instrument will serve advisors and administrators when reviewing survey results by providing information as to what is exactly being measured by the instrument. The third significant contribution made by this research is the development of a short version of the *ACT-SAA*. This process will be completed using assessment of psychometric properties of the instrument and identification of the constructs measured. The development of a short form will be useful to developers of similar instruments and also to ACT for refinement of a short version of the *ACT-SAA*.

Assumption

The idea for this study was generated as one result of an evaluation which was completed in the Spring of 1997 by the researcher of this study. The advisement system which was evaluated has centralized academic advisement. One assumption that must be

made is that other centralized advising units operate in a similar manner and share some of the same concerns. The data used to conduct this research came from an academic college in a large midwestern land-grant university. While it is not necessary to assume similar units will yield the same ratings, it is necessary to assume the same constructs would be identified in the factor analyses.

As stated previously, this study will be valuable to professionals and students by providing feedback useful in the planning and delivery of advising services. This significance is based on research that has found long surveys are intrusive and inefficient. It is further assumed that if the academic advising unit in other colleges is similar and operates in a similar manner to the one in which this study was completed, similar challenges in administration would result.

Limitation

The data collected for this research are not collected from a random sample. As with many surveys, the collection of data from a random sample was not possible. An attempt was made to conduct a census rather than a survey of students seeking advisement. It is estimated that each semester approximately 1,050 students visit the academic advisement office used to conduct this research study. The evaluation team for the Spring of 1997 survey collected 568 instruments from current students. This large sample does not, however, represent a random sample of current students.

Organization of the Study

The remainder of the information related to this research study will be presented in the chapters to follow. Chapter II presents a review of literature. This review will contain

discussion relevant to evaluation of academic advisement and the *ACT-SAA*. Additionally, the review of literature will present evidence that there is a need to determine the psychometric properties of the *ACT-SAA*. The validity and reliability estimates of responses to the SAA will be examined. Also included in the review of literature will be a statement of the research question. Chapter III will outline the methodology to be used when conducting the proposed research. This will include an explanation of the factor analyses to be administered when assessing the psychometric properties of the *ACT-SAA*. The methodology will also include a detailed account of the survey conducted at the midwestern land-grant university which provided the data for analyses. Also included in Chapter III will be extensive information about the *ACT-SAA*, the instrument used to collect data in the Spring 1997 evaluation of services at the midwestern land-grant university. Any necessary control procedures will also be detailed in this section. Chapter IV will present the results of the analyses of the data with explanations provided for each statistical analysis conducted. The conclusions drawn from the analyses as well as recommendations based on these conclusions, will be detailed in Chapter V of the completed report.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter reviews the literature related to the sparsely reported assessment of the psychometric properties of the ACT Survey of Academic Advisement. Specific attention is paid to the following topics as they relate to the current research. The following topics are addressed: 1) The importance of academic advisement, 2) example evaluations of academic advisement, 3) example evaluations of academic advisement using the ACT Survey of Academic Advisement, 4) the ACT Survey of Academic Advisement, 5) assessment of the ACT Survey of Academic Advisement, and 6) justification for this study.

The Importance of Academic Advisement

Many experts in the field academic advisement view academic advisement as one of the most important components to the student retention equation (Hoeft, 1994). The following literature supports the concept that academic advisement is closely linked to retention and that academic advisors have a wide range of responsibilities. These two points assist in the justification for evaluating academic advisement as well as assessing

one of the tools often used in the evaluation process: in this case, the ACT Survey of Academic Advisement.

Relationship of advisement to retention

Good academic advising leads to many positive educational outcomes (Hanson and Raney, 1993). These outcomes include increased student retention, improved grades, better career and educational decision-making, and greater overall student satisfaction. Hanson and Raney conducted a national survey of academic advisement at a large university and concluded that extensive evaluation of academic advisement was necessary due to its influence on retention and thus the life of the institution. Surprisingly, they revealed that fewer than half of the institutions reported conducting regular evaluation of academic advising (Hanson and Raney, 1993).

Hoefl (1994) cited nine sources supporting the relationship between quality advisement and student retention. Faculty, staff, and students are all shareholders in improving student retention through academic advisement. Although the role of academic advisor can vary, the literature cited by Hoefl reveals that several types of advisement exist. The two most typical forms of academic advisors are college teaching faculty who also serve as advisors and full-time academic advisors who work from an advising center.

According to a longitudinal study (Backhus, 1989), retention increased by eight percent as a result of establishing a centralized advisement center at Emporia State University. In support of centralized advisement, Backhus cites Beal and Noel (1980) who claim that inadequate academic advising is the greatest impediment to student retention. Emporia State University (ESU) implemented a Student Advising Center (SAC), a

centralized advising center for undergraduate students, to meet the advising needs of undergraduate students, particularly incoming freshmen. The SAC provided intrusive advising. While this may sound less preferable, it actually goes to the extreme in catering to student needs. Advisors track their students through attendance reports, mid-term grades, and networking with faculty. Students are asked by advisors to come in for periodic meetings to check progress and address problems. Advisors work diligently to maintain personal and face-to-face contact with their advisees. In 1988, the SAC was four years old. It seemed reasonable that this would be a good time to test the theory that quality intrusive advisement improved retention.

Advising Center personnel worked with ESU Management Information Systems to track the attrition of the first class of students experiencing intrusive advisement (Backhus , 1989). Investigators compared students in the SAC group to students not in the SAC group to determine the retention benefit of intrusive advisement. The four-year retention rate had improved by eight percent going from 31.4 percent to 39.4 percent. Since no other changes had taken place other than the establishment of the SAC, Backhus concluded that this form of intense focus on advisement was the cause of improved retention.

The link between advising and fiscal stability often draws the attention of administrators. Glennen, Farren, and Vowel (1996) address this theme in today's higher education literature and reported that universities need to become more efficient and businesslike in their approach. Glennen et al. cite many authors noting that the quality of advisement is directly linked to the retention of students. Glennen et al. concluded the

utilization of intrusive advising is related to significant profit due to increased retention and thus additional revenue. The intrusive advising program increased retention which resulted in more state funds, increased occupancy in the residence halls, increased meal plans purchased, higher activity ticket sales, greater bookstore and snackbar sales, and local tax revenue.

Responsibilities of academic advisors

Academic advisors have a broad spectrum of responsibility creating a heavy reliance by the institution on the quality of the academic advising. Creamer and Atwell (1984) state "Literally everyone agrees on the importance of good advising to effective student decision making,...". Furthermore they wrote that the complexity of most colleges and universities requires that each student have guidance in their endeavors. The bureaucracy of universities is quite thick thus students still need to plan in order to make choices, identify options, set time frames, assess personal resources, and make commitments.

Geis and Huston (1995) relate the experiences of the dean of the school of business at a major university. As a young man, the dean relied on his advisor for information regarding course selection, professor reputation, and course difficulty level. His advisor also helped him through regular progress meetings and provided tips on study tactics, understanding professors, and exam preparation. The services provided to this man as an undergraduate were all based on the fundamental premise that the university is not operated primarily in the service of professors and administrators; it is there to serve

students. Geis and Huston contend the concept that the university is there to serve the students is often overlooked by institutional personnel since they are entrenched and their clientele is transient. Further, Geis and Huston recognize that advisors have a great effect on the current personal and academic experiences of their advisees. In addition to the previously mentioned responsibilities, advisors are also responsible for assisting students with a choice in major, internships, and preparation for graduate and professional schools. With all these vital functions performed by academic advisors, it seems reasonable that administrators would support the evaluation of academic advisement.

In her keynote address to the 1995 conference of the National Association of Academic Advisors (NACADA), Byrd (1995) quotes Wall (1988), "Specifically academic advising will, of necessity: include schedule planning, appropriate choice of major, and explanation of curriculum requirements for that major. It will involve teaching students the proper clerical functions to effect their favorable progress through the institution. It will touch on, but not primarily or exclusively, personal adjustment and career choice issues. Finally, good academic advising will teach the student how to locate appropriate specialized services, such as financial aid, career development, and personal counseling, when these services are deemed necessary." Elaborating her position regarding advisor responsibility, Byrd (1995) explains not only are advisors responsible for all these student services, they are also responsible to an increasingly diverse and changing population. She elaborates by explaining in recent years, more students feel out of place. This comes as no surprise with the increase in nontraditional students and students living off campus. Byrd statistically supports her claim by noting only 20 percent of today's student population fits

the traditional student definition of full-time, living in the residence hall, and 18-22 years of age. Along with this trend is student concern about personal finance. The average student at a public university owes \$15,000, with payments after graduation of \$200 per month over a ten year period (Byrd). These two changes lead to a third trend of students taking longer to complete their degree with five years to completion being the rule rather than the exception. With more students having families and working while in school, it takes longer to meet academic goals. The responsibilities put upon advisors combined with current trends in the student population creates a complex and intense workload for academic advisors. Hanson and Huston (1995) insist nearly everyone involved in academic advising has too many responsibilities and too little time to complete them. Knowing this, they assert that while judgment of student ability adds another task to the list of advisor responsibilities, it actually provides for better service to the student.

Example Evaluations of Academic Advisement

The following example evaluations provide a selection of methods from which to choose in designing an evaluation of academic advisement. In each of the following examples, a survey instrument is used in the evaluation procedure. A description of both the evaluation and the instrument are provided with a brief explanation of its likeness and difference to the ACT Survey of Academic Advisement. Finally, the end of each section provides justification for the proposed study as it relates to the reviewed literature.

The University of Arkansas at Little Rock

The importance of academic advisement has prompted many institutions to evaluate their academic advising process. The University of Arkansas at Little Rock

(UALR) requires each faculty member to be responsible for some undergraduate academic advisement. Hoefft (1994) cites faculty, staff, and students as retention agents and accountable to various elements of academic advisement. The advisement of undergraduates at UALR is shared between faculty and professional academic advisors. UALR recognizes the complexity of advising. Also recognized is the importance of understanding the state, federal, and university policies and procedures. These policies can be very difficult to grasp. Faculty advisors “shadow” a professional advisor to prepare for the role of advisor. During the shadowing process, detailed records are maintained to keep track of student progress as well as advisor recommendations.

Hoefft (1994) describes the instrument used by UALR to evaluate the academic advising process. The form is used to track student progress as well as evaluate advisor performance. This form includes a wealth of information that can be used to gather both formative and summative information regarding advisement at UALR. Examples of the information in this form are: visual reminder of what is expected to be covered in an advisement session; details of the students that were advised by name and major; records of the date advisement occurred; logs of the context (individual, group, telephone) in which the advisement occurred; catalog of the number of referrals by advisors; accounts for the specific nature of a referral. In cases of alleged error that may impede a student's academic progress, the form may assist in the resolution of the error and account for individual advisor error. Upon external review, the form is a feedback mechanism that can indicate areas where the individual advisor needs improvement; indicates the level of faculty involvement in academic advisement; and provides a sample of case studies in

promotion and tenure portfolios. Hoeft states that while the form used at UALR does not assess student satisfaction of faculty advisement, the data available can provide the information necessary to evaluate the advisement system. While this study does provide a useful instrument, the instrument does not collect information regarding student satisfaction. As a consequence, research focused on such an instrument would be beneficial to those seeking information about student satisfaction as it relates to academic advisement.

Texas Academic Skills Program

In their *Report on Academic Advising*, the Texas Higher Education Coordinating Board (1995) states they will seek access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is elitism. Having stated this philosophy, the Texas Higher Education Coordinating Board created the Texas Academic Skills Program (TASP) to enhance student success. This program includes three facets, the central element being academic advising. Legislation requires an annual report on academic advising. In March of 1995, the fifth academic advising survey of Texas was administered. During this survey, TASP used portions of the Academic Advising Self-Assessment Guide to collect information from each of the 174 responding institutions. This self-assessment provides an interesting approach to the evaluation of academic advising. TASP received a response rate of over 90 percent. Advisors, rather than students, were asked to rate their own program and indicate strengths and weaknesses of the service. After data collection was complete, the results of the data analysis were used to draw cautious generalizations regarding the state of

academic advising in Texas. The survey was designed with the assumption that if advisors have the proper tools, such as staff development, fiscal resources, and a reasonable advisor-student ratio, they will be able to serve students in a satisfactory manner. This study emphasizes the importance of the evaluation of academic advisement and compliments the proposed research as it does not focus on evaluation based on student satisfaction.

University of Illinois at Chicago

In 1988 the University of Illinois at Chicago (UIC) implemented a series of reforms to enhance the curriculum. One of the components to this reform was a planned system of faculty advising. Previously, there had been no formal organization to faculty advising (Stokes, 1992). The goal of the program was for each student to have personal contact with a faculty member. Faculty members were given some guidance on how to conduct an advising session and issues that are important to students and their success were noted. To pilot and evaluate this new program, UIC matched 224 pairs of freshman and 224 pairs of transfer students (Stokes, 1992). Freshman were matched based on sex, ethnic origin, class rank, ACT composite score, and declared major. Transfers were matched based on sex, ethnic origin, college code, grade point average at their previous institution, year in school, and declared major. From each pair, one student was randomly selected to be assigned to a faculty advisor and one was assigned to a control group, no advisor being assigned. Each department was asked to keep a record of students meeting with their advisors. After the advising session, faculty completed questionnaires regarding session length, topics covered, and comfort level. In the tenth week of the term,

questionnaires were mailed to students with postage paid return envelopes included. Students who met with advisors were asked three questions about the advising session itself: “How comfortable were you?”, “How helpful was the session?”, and “How interested in you was your advisor?”. Students answered these questions on a 5-point scale similar to those answered by advisors. Seven more items were asked of all students. These items were also answered on a 5-point scale and defined two variables: satisfaction with life at the university and perception of faculty. The description of the instrument used at UIC implies that a short questionnaire of 10 items was deemed adequate.

Emporia State University

As previously mentioned, ESU implemented a system of intrusive advising in 1984 by implementing the SAC. This advising center is staffed by one faculty advisor from each division. The objective in setting up the SAC was to provide advisees resources for academic, social, personal, and vocational development (Vowell & Karst, 1987). The intrusive method of advisement involves constant contact and follow up from advisors. Evaluation of these services is a critical part of the SAC philosophy. ESU designed a study to gather information regarding the opinions advisees have of the SAC advisors. A questionnaire was administered by outside interviewers to 59 randomly selected SAC advisees.

The stated specific purpose of this study was to discover student perceptions of advisors in ESU’s intrusive advising system (Vowell & Karst, 1987). The interviewers asked six questions focusing on: advisor interest in the individual, advisor listening skills, advisor help in general education, benefits from SAC, contact with SAC office staff, and

future offerings of the SAC service. This evaluation method focused on student input and asked for only a limited number of responses. The study met its stated purpose, finding student perceptions of advisors to be generally positive. Students enjoyed contact with both SAC advisors and SAC staff. Of the 59 students surveyed, 58 said this service should be offered to future freshman. Conclusions from this evaluation asserted no major changes were necessary to the current intrusive advising system offered by SAC. Any changes suggested by respondents were unique to the individual. Similar to the ACT Survey of Academic Advisement, this evaluation used responses from students. Different from the ACT instrument, the instrument used in this survey was a guideline for collecting qualitative information. Although, the questions did focus on six major areas, they did not provide the Likert scaled response data.

Iowa State University

Several different advising systems exist including faculty, computer assisted, group, self, peer and paraprofessional, and an advising center. While there is no optimum delivery system (Groth, 1990), the needs of the students and institutions should be examined and advising models implemented accordingly. Iowa State University (ISU) developed a walk-in advising system to meet the needs of students for accessibility, information with clarification, and interaction with advisors. The philosophy behind developing the walk-in system began with a focus on the whole student: psychologically, socially, and intellectually, the process should stimulate and strengthen students in their educational and life endeavors. Groth explains the walk-in advising system was developed

as a result of increased enrollment and expanded need for advising services without a boost in resources.

ISU evaluated the walk-in system through a follow up survey (Groth, 1990) in the Spring of 1987. The survey was administered to all majors using the walk-in system that semester. Using a response scale based on a 5-point Likert scale the instrument included six items: awareness of the walk-in system; satisfaction with the amount of time advisors were available; satisfaction with the current walk-in system; satisfaction with the ease of access to individual advisors; satisfaction with the ability to see an advisor within a reasonable amount of time; and feelings about the office as a result of the walk-in system. Seventy-six students responded to the survey. Results based on one year of existence indicated 79 percent of students were aware of the new system. An overwhelming 89 percent rated the system as excellent or good. Remaining information included an increase in the use of academic advisement as a result of the walk-in system. Many students used the center three to four times per semester rather than the traditional one to two times per semester. Comparable to the ACT Survey of Academic Advisement, the instrument used at ISU was divided into several sections. However, the ISU instrument focused specifically on the walk-in system. The ACT instrument is broader in scope and is often used nationally.

Cumberland Community College

Cumberland Community College (CCC) conducted a study of advisement services in response to negative reports of faculty and administrative staff perceptions of the advisement operation (Stolar, 1994). A second study was conducted for the purpose of

gathering information to restructure the advisement system. The follow-up focused on the opinions of advisement personnel. A 30-item questionnaire was used to collect data. The instrument included items covering the following areas: professional information, general perceptions of advising, the advisors manual, freshman seminar courses, and general comments. The questionnaire was lengthy with items rated along a 7-point Likert scale, as well as open ended questions. Each of the college's 70 advisors completed the questionnaire. Results provided several suggestions: better training for advisors, private advisement sessions, an improved advisor manual, periodic advisor workshops and discussions, a broadened definition of advisement, and a recognition of the link between advisement and retention. Interestingly, neither this survey nor the initial survey included student input, a seemingly logical source of information.

University of Florida

The manner in which advisors are evaluated continues to vary greatly (Severy, Lee, Powers, & Mason, 1994). The two most common types of advisor evaluations are a scheduled conference with the advisor's supervisor and student evaluations. Florida State University (FSU) was in need of an annual advisor evaluation to provide both formative and summative information. Advisors within the advising center established a method by which evaluation could be conducted. It was decided that both student and administrative feedback was necessary. As a result of this decision two instruments were developed.

Development of the instruments first included a careful analysis of the advisor role within the advising center (Severy, et al., 1994). The form used by students was designed to evaluate the technical and interpersonal competencies of advisors. The second form, to

be completed by supervisors, was designed to evaluate job performance, attitudes and habits, relationship styles, and professionalism. The evaluation took place in two stages. The first stage was the collection of student evaluations of advisors. The instrument used in this evaluation was comprised of 19 items which focused on listening and counseling skills, knowledge of university regulations, use of technology, sensitivity to privacy, encouragement offered, etc. Response options were based on a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree. Two different versions of the student instrument existed: one for athletes and one for non-athletes. The second stage consisted of supervisor/advisor conferences. These conferences used a 25 item form to assess advisor competence in four broad categories: job performance, attitudes and work habits, relationship styles, and professional considerations. Supervisors used a 5-point Likert scale to rate the advisors on each of the 25 items. Factor analyses of the collected data identified three factors from each of the two instruments. Reliability was very high for both instruments. The evaluators for this project were very pleased with the tools available for use in this process. The goal of this evaluation was to collect data useful for improving services to students. While the evaluators felt longer forms were necessary, short forms were extremely useful for those with a limited ability to collect data. Like the ACT Survey of Academic Advisement, this evaluation focused on responses from students. This evaluation had the added dimension of feedback from supervisors. Also noted was the data collection benefit of a short form. This instrument was specifically designed for this site-specific evaluation. It is not a nationally marketed and available instrument, like the *ACT Survey of Academic Advising (ACT-SAA)*.

Example Evaluations Using the ACT Survey of Academic Advisement

Several instruments are available for use in the evaluation of academic advisement. As mentioned earlier, the American College Testing Program publishes and markets the ACT Survey of Academic Advisement. The previously mentioned studies used mostly in-house instruments designed for specific institutions. The need for a standardized instrument available on a nation-wide basis enhances the demand for the *ACT-SAA*. Normative information based on years of administering the survey make it an instrument which provides a great amount of information. The following publications illustrate the varied uses of the ACT Survey of Academic Advisement.

Evaluation of Academic Advisement Guidelines

Crockett (1988) a step-by-step approach as the best course in conducting an evaluation of academic advisement and thoroughly charted the steps necessary for the completion of such an evaluation. The first step is gathering information. This phase involves collecting information about the services being evaluated. The questions relate to size and structure of the subject institution as well as information specifically about the advising operation. This step allows the evaluator to understand how the operation works and the areas that are subject to evaluation. The second step is the evaluation of services. Either the evaluator (if in-house) or those chosen by the evaluator answer questions regarding the services. Using Crockett's method, services are rated using scales. The ratings gathered in this portion of the evaluation are from staff and professionals involved in delivering advising services. The third step involves the analysis of the data collected followed by the fourth step which is a call to action. The fourth step is key in this

suggested diagram of evaluating academic advisement. Crockett mentions several instruments available for use in the evaluation of academic advising. The instrument predominately mentioned is the ACT Survey of Academic Advisement. Crockett's "cookbook" for the evaluation of academic advisement suggests the use of the ACT Survey of Academic Advisement. It is noteworthy that the protocol advised by Crockett is published by the American College Testing Program, which developed the ACT Survey.

University of Nebraska at Omaha

Literature revealed academic advising as the number one negative factor in student attrition (Crawford, 1991). Given this information, the University of Nebraska at Omaha (UNO) proceeded with a study of student perception of academic advising. The instrument used was the ACT Survey of Academic Advisement. UNO used all seven sections of the instrument. Participants were solicited from those pre-registered for Fall 1991. Six hundred and thirty-eight students agreed to participate and returned usable instruments. These students represented 8.1 percent of those pre-registered for Fall 1991. Many students provided written comments in Section VII of the instrument.

The sample used by UNO was fairly diverse (Crawford, 1991). Results of the survey revealed mixed feelings among students. A large majority (73%) of students reported satisfaction with the advising system and with the assistance received from their advisors. On the other hand, 51 percent reported mixed reviews regarding their advisor/advisee relationship. Interestingly, ratings received from this survey were statistically lower than those gathered from a previous survey in 1987. Additionally,

Crawford reports the ratings were lower than those for the other public colleges using the same instrument.

UNO used this survey to propose recommendations to the academic advising system (Crawford, 1991). Suggestions included the need for a university-wide review of the nature and structure of academic advising. It was recommended that efforts should be expanded in the area of assisting faculty and professional advisors to address issues such as: which topics should be discussed between advisors and advisees as well as student perception of advisor interest in advisee's needs. The final recommendation was to utilize the "New Student Orientation" program to inform students regarding the responsibilities of the advisee and the advisor in the academic advising process.

Cumberland Community College

Stolar (1996) outlines an evaluation administered at Cumberland Community College in New Jersey. Cumberland used the *ACT-SAA*, the focus of this review, to ask students questions regarding their satisfaction level with the current advising system. Responses were gathered from 667 (36%) of the undergraduate degree seeking students. Cumberland also used this survey to examine the differences in satisfaction rates across the curriculums. Humanities, math, science, social studies and technology majors were all compared regarding the satisfaction rates of academic advising.

Stolar(1996) made several conclusions after conducting the survey. Advisors received generally positive feedback from the survey. Each group of subjects gave positive scores to statements that advisors are good listeners, respect students' rights to make their own decisions, encourage them to achieve their goals, are approachable and easy to talk

to, keep personal information confidential, and have a sense of humor. All advising groups (based on major) were given unfavorable ratings with respect to encouraging students to participate in extracurricular activities. As with the UNO study, comments were also provided in Section VII. Interesting to note is the fact that Cumberland Community College previously conducted a similar survey using a different instrument. No explanation is given for the change in survey instrument. However, an easy comparison between the ACT instrument and a different instrument could be made by this institution.

The Third ACT National Survey of Academic Advising

Habley (1988) published a book covering the state of academic advising in today's post-secondary institutions. Interestingly, this was published by the ACT National Center for the Advancement of Educational Practices. Wesley Habley and David Crockett, two names often mentioned when discussing academic advising, conducted the Third ACT National Survey of Academic Advising. This data collected from a national sample of 447 institutions was then analyzed to answer several research questions. Hypotheses focused on student satisfaction, advisor competence, and other areas addressed in the ACT Survey of Academic Advisement. Additionally, Habley and Crockett collected institutional data, such as which advising system was used and the number of advisees assigned to each advisor. This allowed them to use the ACT Survey to make comparisons among different institutions.

Noble (in Habley, 1988) used the *ACT-SAA* to measure differences in students' perceptions among two-year, four-year public, and four-year private institutions. The study utilized of 19,524 student surveys from students enrolled in 55 colleges. The data

were not collected from a random sample of students and were not statistically adjusted to create a representative sample of the student population. Two-year and four-year private colleges had the highest level of agreement with positive statements concerning their advisor as compared to four-year public institutions. Overall four-year public institutions did not rate as well as two-year, according to student perception.

Taken together, these evaluations and surveys illustrate the perceived usefulness of the ACT Survey of Academic Advisement. It is interesting that many publications citing the use of the ACT Survey of Academic Advisement are actually published by ACT. As a result, independent examination and reporting of the use of the *ACT-SAA* appears warranted

The ACT Survey of Academic Advisement

The American College Testing program publishes and markets a series of evaluation instruments called the ACT Evaluation Survey Services. Included in this series of services are a variety of instruments to measure different attitudes that may be of interest to administrators in higher education. Examples of the surveys offered include the following: *Adult Learner Needs Assessment Survey*, *Alumni Survey*, *Entering Student Survey*, *Student Opinion Survey*, and the *Survey of Academic Advising*. ACT advertises these instruments as useful for helping institutions obtain comprehensive information about the attitudes and opinions of the people served (ACT, 1996/97).

According to Mittelholtz and Noble (1993), the *ACT-SAA* obtains students' impressions of their institution's academic advising services. It should be noted that this

instrument is only to be used to measure student opinion about academic advising. It is not designed to be used to evaluate personal or career counseling services.

The Survey of Academic Advising (SAA) is composed of seven separate sections. Mittelholtz and Noble (1993) describe the purpose of each section. Section I includes simple biographical questions. Section II questions identify the advisor while Section III identifies advising needs and assesses students' satisfaction regarding these needs. Completion of section IV requires the student to rate their level of agreement with 36 statements about their advisor. Section IV asks students to rate such statements as "My advisor knows who I am" and "My advisor allows sufficient time to discuss issues or problems". Section V requests information regarding the frequency and length of visits to the advisor. The instrument ends with sections VI and VII which allows space for additional questions to be written by the institution and a space for comments and suggestions from the student.

This evaluation instrument has been developed for the purpose of providing feedback. Use of this feedback allows institutions to identify their constituency as well as the overall satisfaction level of advisees.

Assessment of the ACT Survey of Academic Advisement

The *ACT-SAA* provides a tremendous amount of information to institutions. The wide use of the instrument presses assessment of the instrument in order to know if the information is accurate. The following publications provide the currently available assessments of the ACT Survey of Academic Advisement.

Mittelholtz and Noble (1993) examined the validity of each instrument offered by the ACT Evaluation and Survey Services. The study was conducted at individual institutions to determine the degree to which a particular survey could help the institution improve their services. Previous studies were cited supporting the ability of the surveys to serve as instruments for eliciting the perceptions of students concerning institutional programs, services, or the general environment. The studies cited did include validity testing of the Survey of Academic Advisement. The research conducted by Mittelholtz and Noble examined the ability of each instrument to measure and reflect a change in student perceptions resulting from changes made by the institution in programs, services, and/or environment. The study was conducted based on the theory that a valid instrument will reflect a change in student perception according to changes in services. The study identified some characteristics that might influence some survey items. These characteristics included age, race, sex, college GPA, and purpose for attending the institution.

Mittelholtz and Noble (1993) asked personnel at the institutions to identify items which would signal anticipated change. Of the 23 items identified for expectant change, 18 changed in the predicted direction. Three of the remaining items changed in the opposite direction and the other two items maintained identical means for both administrations of the survey. Supporting claims of validity of the instrument, it was concluded that 75 percent of the predicted changes were supported by the student response data.

There are other instruments available to use in the evaluation of academic advising. Srebnik (1988) introduces her review of 12 different instruments with an overview of

evaluation of academic advisement. Citing the first and second National Survey of Academic Advising conducted by ACT, Srebnik explains that 76 percent of the 754 institutions surveyed had no formal evaluation process for their advising services. According to Srebnik's review, most instruments were developed and used by specific post-secondary institutions. Others were developed by measurement professionals and consultants. Srebnik did not review the ACT instrument, but did justify her review based on data collected from the first two ACT National Surveys of Academic Advising.

Justification for this study

Careful review of the related literature clarified the need for the proposed research. The following conclusions appear to justify the assessment of the psychometric properties of the *ACT-SAA* and development of a short form of the ACT instrument. There is limited external empirical review of the *ACT-SAA*. Most of the publications regarding the validity and reliability of the instrument are published by ACT. Sun and Valiga (1997) did assess the generalizability of the instrument, however the focus of the independent research was to compare the three generalizability models. This lack of outside review may create a credibility problem in that few external sources are researching the technical characteristics of this widely used instrument. The *ACT-SAA* should have a short form as an option. Other surveys in the ACT Evaluation and Survey Services have short forms available. Srebnik (1988) gives the advantages of a short form noting that short instruments can be easily and quickly administered with the results readily available. With the ACT instrument containing six sections and over 80 questions, these advantages are not currently available for users of this instrument.

Hanson and Huston (1995) suggest assessment of academic advisement include three dimensions. The process should answer the questions, “What is assessment?”, “Who uses academic advising and why?”, and “How does academic advising work?”. Certainly the affiliation shared between academic advisement and retention, and the broad scope of responsibilities held by academic advisors, strengthen the justification for evaluation of academic advisement and the assessment of tools used in the evaluation: for purposes of this study, the ACT Survey of Academic Advisement.

CHAPTER III

METHOD

This chapter describes the methods of the research and addresses the following areas: (1) restatement of the purpose, (2) subjects, (3) procedures, (4) instrumentation, and (5) research design. Additionally, because the evaluation which took place at the large midwestern land-grant university triggered the onset of this study, it is included in the Methodology description where appropriate. Headings are provided throughout this chapter indicating to which portion of the research the information applies. "Evaluation of 1997" is used to indicate portions regarding the evaluation conducted in the Spring of 1997 at the large midwestern land-grant university. "Assessment" is used to indicate portions regarding assessment of the psychometric properties of the *ACT Survey of Academic Advising (ACT-SAA)*. "Short form" is used to indicate portions regarding the development of a short form of the *ACT-SAA*.

Restatement of the Purpose

There are two purposes of this research. The first purpose is to assess selected psychometric properties of the *ACT-SAA*. This is justified due to lack of literature about the instrument from sources other than ACT. Nearly all publications written about the *ACT-SAA* are published by ACT or an associate. The second purpose of this research is to create a short version of the *ACT-SAA*. The ACT Evaluation and Survey Services, of

which the Survey of Academic Advising is a part, provides a short form for many of the instruments in the service. The *ACT-SAA* is a candidate for such a form which has not yet been created.

Subjects

This section gives general information regarding the samples which were used in the assessment of the psychometric properties of the *ACT-SAA* and in the development of a short form of the *ACT-SAA*. More detailed demographic information regarding these data is reported in Chapter IV of this report. An application for use of archived data as well as collection of pilot data for the short form has been approved by the Oklahoma State University Institutional Review Board (See Appendix A).

Evaluation of 1997

The advising unit was located at a large midwestern land grant university. The evaluation was conducted by the researcher of this study. The data were collected in the Spring of 1997. Participants in this evaluation were undergraduate students in the College of Education. Students ranged from freshman to senior in class level. Majors represented were elementary education, English education, math education, science education, social studies education, physical education, health promotion, leisure management, therapeutic recreation, and trade and industrial education. Both males and females participated. Most students participating were full-time, with only a few attending part-time. A range of dates was selected by the researcher/evaluator of this study in which to collect data. The collection dates ran from the middle of March through the end of April. Students entering the academic advising unit and seeking advisement within the targeted date range were

asked to voluntarily participate upon their arrival in the office. The population seeking advisement consisted of 1,200 students. Of those 1,200 student seeking advisement, 568 completed at least some portion of the ACT instrument.

It should be mentioned that the researcher initially intended to use the data collected at the large midwestern land-grant university to assess the psychometric properties of the ACT instrument and develop a short form. Due to sample size problems, which are discussed later in this chapter, these data were not adequate to assess the psychometric properties of the ACT instrument.

Assessment

The Research Division of ACT makes archival data available to graduate students. For purposes of this research, ACT provided all of the raw data from the *ACT-SAA* which had been collected and sent to them for scanning since January of 1993. The archived data used for this research were made available to the researcher by ACT at a cost of \$100.00. The charge for this data covers the personnel time required to extract the data from the ACT database. To the extent possible, descriptions of this archived sample will be reported in Chapter IV.

Short form

There were two sets of subjects used to develop the short form of the *ACT-SAA*. The data described in the previous section were used to determine which questions to include in the short form. The second set of subjects used to develop the short form were those participating in the pilot of the short form. Students from three different colleges (business, arts and sciences, and engineering) were asked to complete the short form. Data

collection took place at the midwestern land-grant university in which the evaluation was conducted in the Spring of 1997 by the researcher of this study.

Procedures

The following three sections describe the procedures in the evaluation of 1997, assessment of the psychometric properties of the *ACT-SAA*, and in the development of a short form of the *ACT-SAA*.

Evaluation of 1997

As previously mentioned, data were collected in the Spring of 1997. However, several steps took place prior to the actual collection of data. The evaluation of academic advising in the College of Education was conducted by the researcher, one of the advisors in the unit. Application for funding of this evaluation resulted in a small University grant of approximately \$4,000 awarded to conduct the evaluation. Once funds were made available, the advisor took steps to plan the evaluation of services. Meetings were held with the director of the unit as well as other staff members to develop the best plan for collecting the evaluation data. The goal of the unit was to collect quantitative data which would illustrate the strengths and weaknesses of their unit for purposes of planning and delivering advising services. After defining the goals and obtaining commitments from other staff members, the advisor/researcher conducting the evaluation was able to proceed.

The first step was to select an instrument. The evaluating advisor solicited information from a variety of resources. The resource which proved to be most beneficial was the nationwide listserv of academic advisors. Requests to the listserv brought

suggestions for instruments from more than ten different individuals as well as ACT. The evaluating advisor reviewed instruments from other institutions and the *ACT-SAA*. The ACT instrument was the only nationally available instrument from a test development company and was thus reviewed for use in this evaluation. After careful consideration, the evaluating advisor chose the ACT instrument for use in evaluating the services of the academic advising unit.

After making this decision, the evaluating advisor contacted ACT. Upon referral to the Research Division, the advisor consulted with a research associate to determine the number of instruments needed for the evaluation. Surveys were ordered and shipped to the advising unit. Surveys were paid for using funds from the grant awarded to conduct the evaluation. Once the survey instruments were received, the advisor was able to determine procedures for collecting data. Thus, the advising unit concluded on-site data collection was the most reasonable approach. The ACT survey requires that additional information be made available to the student in order to complete the survey. The evaluating advisor typed the additional information needed, made enough copies to accompany each survey, and put one with each survey. Examples of additional information needed are codes for students to indicate advisor and codes for students to indicate major. A special instruction was also included on the survey: students were asked to omit the first question, the request for student identification number.

As previously mentioned, surveys were collected from the middle of March until the end of April. These dates represent the enrollment period during that semester when students were enrolling for the following Summer and Fall semesters. As students came in

seeking advisement, they were asked to voluntarily complete the survey. Students were given surveys on a clipboard with pencils provided. They were instructed to return the survey to the front desk before meeting with their advisor. Completed surveys were collected throughout the day. At the end of each day the date was indicated on each survey in place of the student identification number.

Once collection of data was complete, responses to the surveys administered within the past six weeks were entered into a database. The evaluating advisor, the researcher of this study, chose to hire an undergraduate student worker to assist with the project. This decision was made in order to assure data assimilation was conducted by an unbiased party, to provide work opportunity for a student, and to be able to check accuracy of data. Using SPSS statistical software, the student worker created a database with each question set up as a variable. Descriptive statistics were compiled. The student worker and the evaluating advisor reported this information in graphic and verbal form to the Director of Student Services, Associate Dean, and Dean of the College of Education. Additional reports were sent to the department providing funds and to the College accreditation team.

As mentioned in previous chapters, this process, conducted by the researcher of this study, generated a need to further assess the psychometric properties of the *ACT-SAA* and to create a short form a short form of the ACT-SAA. It has been the experience of this researcher that while the feedback of this instrument was useful, the process was much too intrusive to advising procedures.

Assessment

Initially, it was the intent of the researcher to use the data from the Spring 1997 evaluation to assess the reliability and validity of the ACT instrument and to develop a short form. In order to assess reliability and validity of an instrument, it is necessary to have enough cases (responses from subjects suitable for analysis) from which to analyze and report results. The general rule for sample size is five cases for each item in the scale, or 200 cases as suggested by Crocker and Algina (1986). For purposes of this research it was necessary to have at least 180 cases suitable for use in the statistical analyses. A preferred target number was 200 cases as suggested by Crocker and Algina. When conducting the analyses, cases with incomplete data are deleted from the analysis. Missing data posed a problem, particularly for Section III of the ACT instrument, the section with two-part questions where it was not always appropriate to answer the second part. Of the 568 completed instruments, collected at the large midwestern land-grant university, only seven cases had completed each question in portion B of the ACT instrument (See Appendix B). This adversely affected the site specific data making it unusable for the purposes of assessing the psychometric properties of the *ACT-SAA* and for developing a short form. As a result of the limited sample size, the researcher of this study chose to use only the archived data made available by ACT to assess the psychometric properties of the *ACT-SAA*.

Short Form

After the assessment of the psychometric properties of the *ACT-SAA* was complete, creation of the short form began. The same data used in the assessment portion of this research were also used in development of the short form. These data were

analyzed in order to select items for the short form. After items were selected and assimilated, the new form was typed and duplicated on blue paper.

Once the short form had been developed (See Appendix C) and duplicated, the researcher piloted the newly created short form. By contacting academic advising units across the campus, the researcher obtained permission to test the instrument in three academic advising units on the same large midwestern land grant university. Once the researcher gained permission from these units, testing was scheduled. The survey was scheduled for administration during the enrollment period for upper class students. This was done to avoid surveying students who had not previously been advised in that office. This was identified as a potential problem since the survey took place during the Fall semester when many students were new. After administration of the survey had been scheduled, duplicated surveys were delivered to the different academic advising units. Advisors were asked to keep the surveys in a safe place. Once collection of data was complete, the researcher visited each office again to gather the data. A personal "Thank you" as well as a follow up note was sent to each office in appreciation of their participation.

The researcher created a database in SPSS and entered the data in order to assimilate the information. Analyses were conducted to assess the reliability and validity of the newly created instrument. These analyses were conducted to aid in further refinement of the short form. Once the development of the short form is complete, the instrument, along with supporting documentation will, be sent to ACT for their consideration.

Instrumentation

The *ACT-SAA* (Appendix B) was used to collect both the site-specific data and the archival data obtained from ACT. Additionally, this instrument served as the source of items used on the short form which was developed after assessment of the psychometric properties. The ACT survey is part of the ACT Evaluation and Survey Services. The instrument contains seven sections. Data from this instrument were used in both the assessment of the psychometric properties of the *ACT-SAA* and in the development of a short form of the *ACT-SAA*. Each section of the instrument is detailed below.

Section I-Background Information. Section I asks 15 questions referring to background information. These questions request; student identification; age; ethnicity; class level; purpose for entering the institution; sex; marital status; enrollment status; last type of school attended prior to current institution; number of hours employed per week; residence classification; self-reported grade point average; college residence; major; and advisor. These questions are answered on a nominal scale. Information in this section is not used for the evaluation of academic advising, but rather for the identification of the constituency.

Section II-Advising Information. Section II, titled “Advising Information”, has 4 questions about the institution’s academic advising system. A sample question is: “Which of the following best describes your current academic advisor?” Possible answers to this question are: “Faculty member”; “Advising center staff member”, “Other college staff member”, “College-appointed peer counselor”, and “I do not have an advisor (skip to section VI).” This section is a mixture of information questions and evaluation questions.

Some questions are nominal in scale. Other questions in this section are ordinal and designed to give a rating where a high score indicates greater student satisfaction.

Section III-Academic Advising Needs. Section III is split into two parts. Referring to academic advising needs, these 18 questions first ask if an issue has been discussed, then go on to ask students to rate their satisfaction with advisor's assistance on issues which have been discussed. Part A has three possible answers: "Have not discussed with advisor and do not need to", "Have not discussed but should have", and "Have discussed". Part B provides the opportunity for students to rate their satisfaction regarding each of the 18 issues. Satisfaction is reported on a 5-point Likert scale with possible answers being "Very satisfied", "Satisfied", "Neutral", "Dissatisfied", and "Very dissatisfied". A high score indicates dissatisfaction with "Very dissatisfied" coded as a five on the scale. Examples of questions in this section are: "Coping with academic difficulties" and "Selecting/changing my major area of study".

Section IV- Impressions of Your Advisor. Section IV also uses a 5-point Likert scale. This section solicits the student's impressions of their advisor. The stem of the section says "My advisor:", indicating that each statement should begin with these two words. Possible answers to the 36 statements in Section IV are "Does not apply", "Strongly agree", "Agree", "Neutral", "Disagree", and "Strongly disagree". Once again, a high score indicates dissatisfaction with "Strongly disagree" coded as a five on the scale. Questions in this section include: "Is a good listener", "Keeps me up to date on changes in academic requirements", and "Seems to enjoy advising".

Section V-Additional Advising Information. Section V asks additional advising information such as “Have you changed advisors since enrolling in this institution?” and “During the past year, how often did you meet with your advisor?”. This section is used to include questions that cannot be answered with a Likert type scale. This section employs both nominal and ordinal scales.

Section VI-Additional Questions. Section VI provides space for answers to additional questions provided by the specific institution. Evaluators are provided space for 30 additional questions with a maximum of 12 possible answers for each question.

Section VII-Comments and Suggestions . Section VII is reserved for any written comment and information the student may want to provide.

Research Design

The following section will outline, in a step-by-step format, the procedures used in assessing the psychometric properties of the *ACT-SAA* and in developing a short version of the instrument.

Assessment: steps one through three

Step 1. Assess the reliability of the responses to the *ACT-SAA*. The internal consistency reliability of the ACT instrument was assessed using Cronbach's coefficient alpha. Recall from the description of the instrument that each section is designed differently. Of the seven sections, only sections III and IV were designed to be answered on a Likert-type scale. These were the only two sections assessed in the area of internal consistency reliability. According to Crocker and Algina (1986) alpha can be used to estimate the internal consistency of items which are dichotomously scored or items which have a wide range of scoring weights such as those on some attitude inventories.

Step 2. Assess construct validity of the ACT instrument. An exploratory factor analysis was conducted using the archived data purchased from ACT to determine the number of underlying constructs in the ACT instrument. Using the constructs identified through the exploratory factor analysis, confirmatory factor analyses were conducted using four random samples of cases from the entire archived ACT data set.

Step 3. Assess content validity of the ACT instrument. Content validity of the ACT-SAA instrument was judged by the academic advisors whose advising unit also participated in testing of the short form later in the study. Popham (1990) quotes a definition for content-related evidence of validity from Standards for Educational and

Psychological Testing (1985): “In general, content related evidence demonstrates the degree to which the sample of items, tasks, or questions on a test are representative of some defined universe or domain of content.” Popham further suggests a step-by-step method of gathering content-related evidence of validity which was applied in the current study. Within his method, he defines those capable of judging content validity as knowledgeable individuals who can answer (1) whether each item represents the content universe of interest, and (2) the extent to which the content universe’s important components have been measured by the test’s items. For purposes of this research, an expert capable of judging content validity will be defined as meeting all of the following criteria:

1. The individual had been an academic advisor for more than 1 year *or* had been working in an advising center for more than five years;
2. Through communicating with students and other staff members, the individual had an understanding of what students’ need and want in academic advising services; and
3. The person had regular student contact as part of their position.

Three panelists were chosen from a pool of advisors who worked in the college student service units of the large midwestern land-grant university. Their task was to judge the content validity of the ACT instrument. Panelists were asked to independently review each item on the test. A complete example of the packet given to each panelist is provided in Appendix D.

Short Form: Steps four through eight

Step 4. Select items. Items for inclusion on the short form were chosen based on content validity and internal consistency. More specifically, the items chosen represent a variety of content. Additionally, attention was given to the strength of the question as measured by the factor loadings in the factor analysis used to assess construct validity.

Step 5. Pilot test the short form. The newly developed short form was tested to determine its ability to assist in the evaluation of academic advisement. Testing took place on the same large midwestern land-grant university which provided the site-specific data. The researcher approached directors of academic advising units to acquire permission to administer the short form in individual offices. Administration of the instrument took place in three academic advising units. The number of units participating was based on agreement of administrators to participate. Students surveyed were undergraduates seeking advisement during the Fall 1999 semester for Spring 2000 enrollment. Only students with an advising history in the advising unit participated.

Step 6. Assess content validity of the short form. Using professional advisors from the advising units used to pilot this short form, content validity was assessed using expert opinion as described for assessment of the *ACT-SAA* (See Step 3).

Step 7. Assess reliability of the short form. Using Cronbach's coefficient alpha, the reliability of the short form was calculated for the scale originating from Section IV. An attempt was made to assess internal consistency reliability of the scale originating from Section III, which is described in Chapter IV.

Step 8. Assess construct validity of the short form. As with the ACT-SAA, construct validity of the responses was assessed using factor analysis. This analysis is described completely in Chapter IV of this manuscript.

CHAPTER IV

RESULTS

The results of the analyses conducted in each step of this research are reported in this chapter. Results are presented according to the steps detailed in the Research Design portion of Chapter III.

Assessment: Steps one through three.

Step 1. Assess the reliability of the *ACT Survey of Academic Advising (ACT-SAA)*.

Internal consistency reliability of the ACT instrument was assessed using Cronbach's Alpha. Reliability was assessed for Sections III and IV of the ACT instrument. Section III of the instrument contains 18 two-part questions. Students needed to answer part B of each question in Section III for their case to be included in the reliability analysis. For clarity, Table 1 lists and translates each variable used in the reliability analysis. Due to elimination of cases with missing values, only cases with complete data across items were used. Unfortunately, the Evaluation of 1997 data yielded only 7 cases for which to calculate alpha. Archival ACT data were thus used, yielding 12,333 of the 42,669 cases for analysis.

Table 1

List and translation of each item in Section III of the *ACT-SAA*

Variable code	Code translation
Stem	Satisfaction with advisor's assistance regarding...
Q301B	my academic progress
Q302B	scheduling/registration procedures
Q303B	dropping/adding courses
Q304B	obtaining course credit through nontraditional means
Q305B	selecting/changing my major area of stud
Q306B	meeting requirements for graduation
Q307B	improving my study skills and habits
Q308B	matching my learning style to particular
Q309B	obtaining remedial/tutorial assistance
Q310B	clarifying my life/career goals
Q311B	identifying career areas which fit my cu
Q312B	coping with academic difficulties
Q313B	obtaining financial aid
Q314B	obtaining employment on campus
Q315B	finding a job after college
Q316B	continuing my education after graduation
Q317B	withdrawing/transferring from this institution
Q318B	dealing with personal problems

Data from Section III of the ACT instrument yielded an exceedingly high reliability with an overall Cronbach's Alpha of .9628. Additionally, Table 2 illustrates every item appeared to have a fairly high correlation with the total scale. As noted in Table 2, *Item-total correlations* ranged from .6538 to .8117. The values in the *Alpha if item deleted* column of the table suggest that all of the 18 items appear to be equally important.

Table 2

Item-total Statistics

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q301B	42.5765	160.5654	.7095	.9613
Q302B	42.6693	160.9708	.6538	.9622
Q303B	42.5872	161.4633	.6927	.9616
Q304B	42.2301	160.6313	.7370	.9609
Q305B	42.4708	160.4180	.7422	.9609
Q306B	42.5253	158.8308	.7309	.9611
Q307B	42.3334	159.0977	.7973	.9601
Q308B	42.3029	158.0610	.8057	.9599
Q309B	42.3070	160.5713	.7719	.9605
Q310B	42.4017	157.6004	.8068	.9599
Q311B	42.3681	157.3111	.8051	.9599
Q312B	42.3308	158.0853	.8117	.9598
Q313B	42.2478	159.6561	.7030	.9615
Q314B	42.2591	160.8975	.7373	.9609
Q315B	42.1902	158.7898	.7812	.9603
Q316B	42.3117	159.0679	.7821	.9603
Q317B	42.2788	161.9833	.7455	.9609
Q318B	42.3584	160.7864	.7600	.9606

(N=12,333)

Section IV of the ACT instrument is comprised of 36 questions to be answered on a 5-point Likert scale. For clarity, Table 3 lists each item label and its translation. Archival

data yielded 21,434 participants with complete data, out of the 42,669 total cases.

Therefore, analysis was completed with data from students who had responded to all items.

Table 3

List and translation of each item in Section III of the ACT-SAA

Stem	My advisor...
Q401	knows who I am
Q402	is a good listener
Q403	expresses interest in me as a unique individual
Q404	respects my opinions and feelings
Q405	is available when I need assistance
Q406	provides a caring, open atmosphere
Q407	checks to make sure we understand each other
Q408	respects my right to make my own decision
Q409	provides me with accurate information about prereqs
Q410	keeps me up to date on changes in academic reqrmnts
Q411	refers me to other sources from which I can gain help
Q412	encourages me to assume an active role in planning
Q413	accepts constructive feedback concerning effectiveness
Q414	encourages me to achieve my educational goals
Q415	helps me identify the obstacles I need to reach goals
Q416	takes the initiative in arranging meetings
Q417	is on time for appointments with me
Q418	clearly defines advisor/advisee responsibility
Q419	allows sufficient time to discuss issues
Q420	is willing to discuss personal problems
Q421	anticipates my needs
Q422	helps me select courses that match my interests
Q423	helps me examine my needs, interests, and values
Q424	is familiar with my academic background
Q425	encourages me to talk about myself and experience
Q426	encourages my interest in an academic discipline
Q427	encourages my involvement in extracurricular
Q428	helps me explore careers in my field of
Q429	is knowledgeable about courses outside my major
Q430	seems to enjoy advising
Q431	is approachable and easy to talk to
Q432	shows concern for my personal growth and & development
Q433	keeps personal information confidential
Q434	is flexible in helping me plan my academic program
Q435	has a sense of humor
Q436	helpful, effective advisor whom I would recommend

Analysis of these data also revealed strong internal consistency reliability ($\alpha=.9863$). As with Section III, Section IV items appeared to correlate well with the overall scale, indicating each question was appropriate as an item within the scale. Reference to Table 4 indicates the *Item-total correlation* ranged from .6537 to .8747. These values suggest that Cronbach's alpha coefficient remains very high, even when any one of the 36 items were deleted. This is further illustrated in Table 4 under *Alpha if item deleted*.

Table 4

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q401	112.8863	864.8848	.6537	.9862
Q402	112.9184	864.4757	.8194	.9856
Q403	112.7002	855.8456	.8488	.9855
Q404	112.8605	863.8124	.8345	.9856
Q405	112.6736	862.2586	.7661	.9858
Q406	112.8041	860.5880	.8540	.9855
Q407	112.7317	860.1261	.8491	.9856
Q408	112.9593	869.8051	.7725	.9858
Q409	112.8266	862.7056	.7738	.9858
Q410	112.5130	857.5924	.7984	.9857
Q411	112.5849	859.7243	.8008	.9857
Q412	112.7744	863.2686	.8051	.9857
Q413	112.4865	862.0476	.8199	.9856
Q414	112.7990	861.0817	.8464	.9856
Q415	112.5912	858.6685	.8493	.9855
Q416	112.1981	854.9790	.7619	.9859
Q417	112.7742	867.3975	.7312	.9859
Q418	112.5419	857.5163	.8382	.9856
Q419	112.7684	862.9283	.8177	.9856
Q420	112.4903	864.4715	.7872	.9857
Q421	112.4071	861.5706	.8340	.9856
Q422	112.6751	860.7433	.8290	.9856
Q423	112.5287	858.2353	.8628	.9855
Q424	112.5856	860.4146	.7936	.9857
Q425	112.3478	857.8894	.8243	.9856
Q426	112.5119	860.0174	.8397	.9856
Q427	112.2954	863.0862	.7538	.9858
Q428	112.3746	859.7651	.8010	.9857
Q429	112.5307	863.9470	.7704	.9858
Q430	112.7350	858.7069	.8507	.9855
Q431	112.8800	860.3388	.8331	.9856
Q432	112.6457	856.4597	.8817	.9854
Q433	112.8234	869.4256	.7638	.9858
Q434	112.7507	861.0833	.8618	.9855
Q435	112.8777	864.5570	.7796	.9858
Q436	112.7552	852.2433	.8747	.9855

(N=23,468)

Step 2. Assess the construct validity of the ACT instrument. Construct validity of the *ACT-SAA* was assessed. Exploratory factor analysis using principal axis factoring was used to identify the number of underlying constructs being measured in each of the scales presented in Sections III and IV.

Section III proved to have only one measured construct within the scale. The exploratory factor analysis revealed only one factor with an eigenvalue greater than one. This single factor, with an eigenvalue of 11.089, explained 61.6 percent of the total variance among scores. This suggests Section III is designed to measure only one construct, the “Academic advising needs” as named by ACT. Table 5 lists the 18 factors for this analysis along with the corresponding eigenvalues and the percent of variance explained. Figure 1, the scree plot for this analysis, visually demonstrates and confirms the single factor existing in Section III. Table 6, the factor matrix, lists the variables along with the individual factor loadings. All items had factor loadings of .659 or higher; above the .400 standard suggested by Hatcher (1994). These loadings also fell within the more stringent standard outlined by Stevens (1996) who suggests that lower loadings indicate a weak factor.

Table 5

Total Variance Explained: Section III of the ACT instrument

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	11.089	61.603	61.603
2	.990	5.502	67.105
3	.686	3.809	70.914
4	.589	3.270	74.184
5	.502	2.791	76.974
6	.462	2.567	79.541
7	.425	2.363	81.904
8	.406	2.256	84.160
9	.358	1.986	86.146
10	.355	1.972	88.118
11	.327	1.819	89.937
12	.311	1.725	91.663
13	.302	1.678	93.340
14	.289	1.605	94.946
15	.257	1.430	96.376
16	.244	1.356	97.732
17	.231	1.282	99.014
18	.178	.986	100.000

(N=12, 333)

Figure 1

Factors and eigenvalues for Section III
of the ACT-SAA

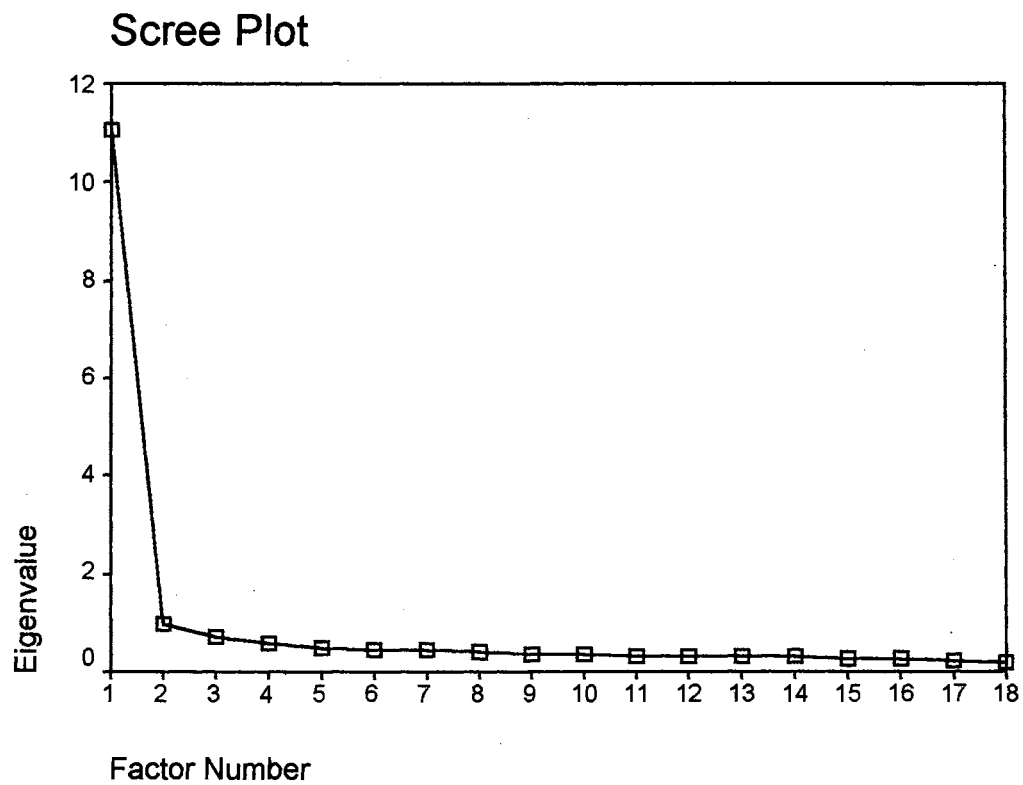


Table 6

Factor Matrix: Section III of the ACT instrument

Question	Factor 1
Q301B	.720
Q302B	.662
Q303B	.702
Q304B	.752
Q305B	.756
Q306B	.742
Q307B	.815
Q308B	.823
Q309B	.790
Q310B	.823
Q311B	.822
Q312B	.829
Q313B	.719
Q314B	.754
Q315B	.798
Q316B	.799
Q317B	.763
Q318B	.778

Due to missing data, resampling was used to conduct additional factor analyses confirming the identified constructs within the instrument. Resampling is the process of selecting random samples from a data set in order to conduct several identical analyses from the same data set. Often referred to as bootstrapping, this method capitalizes on the commonalities inherent in a given sample (Thompson, 1992). Two

random samples of 20 percent were selected from the same data set, and the data were factor analyzed using principal axis factoring. Each of the two confirmatory analyses reflected the same single factor for the scale. All items within the scale clearly loaded on the factor (see range of loadings, Table7) measuring academic advising needs. As with the first analysis, examination of the eigenvalues, the factor loadings, and the scree plot tended to support a single factor. To illustrate support for the single factor, it is necessary to label the two analyses which were conducted in the resampling process. The random samples extracted 20 percent of the cases; designated samples A and B. Table 7 lists the eigenvalue and percent of variance explained by the single factor in the analyses of these two random samples drawn from the large ACT data set.

Table 7

Results of factor analyses: A and B

Analysis	Eigenvalue	% of Variance Explained	Range of Factor Loadings
Full Data Set	11.089	61.603	.662 - .829
A	11.388	63.266	.664 - .836
B	11.036	61.310	.657 - .829

Section IV of the *ACT-SAA* was factor analyzed using the same steps used in assessing Section III. An initial exploratory factor analysis was conducted using completed cases from the entire data set of 42,669 cases. Factor analyses were also conducted with data from two randomly selected samples of 20 percent of all cases; designated samples Y and Z. Section IV followed a similar pattern as Section III. While the exploratory factor analysis using the entire data set extracted two factors, examination of the eigenvalues, factor loadings, and scree plot clearly point to one factor. Once again, the first factor explained a large portion of the variance with an eigenvalue of 24.396 and 67.768 percent of the variance explained (illustrated in Table 8). The second factor had an eigenvalue of only 1.223 and explained 3.397 percent of the variance. Figure 2, the scree plot for this analysis also illustrates that a single factor held a great portion of the explained variance. Factor loadings for the first factor ranged from .659 to .888 (see in Table 9). Many items had negative loadings for the second factor. No items loaded at the standard .400 or higher (Hatcher, 1994). Once again, the ACT instrument appeared to contain a scale which measured a single construct, in this case, "Impressions of your advisor".

Resampling was also used in the confirmatory factor analyses. Illustrated in Table 10 with eigenvalues, explained variance, and range of loadings, the confirmatory analyses support the theory of a single factor; "Impressions of your advisor".

Table 8

Total Variance Explained: Section IV of the ACT instrument

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	24.396	67.768	67.768
2	1.223	3.397	71.165
3	.810	2.250	73.415
4	.660	1.834	75.250
5	.607	1.686	76.936
6	.552	1.534	78.470
7	.504	1.399	79.869
8	.433	1.203	81.073
9	.410	1.138	82.211
10	.388	1.078	83.289
11	.371	1.029	84.319
12	.336	.933	85.252
13	.325	.903	86.155
14	.321	.892	87.047
15	.311	.863	87.910
16	.295	.820	88.730
17	.277	.769	89.499
18	.258	.716	90.215
19	.257	.713	90.928
20	.245	.679	91.607
21	.236	.654	92.262
22	.229	.637	92.898
23	.222	.617	93.516
24	.221	.615	94.130
25	.217	.602	94.732
26	.212	.588	95.319
27	.207	.576	95.895
28	.198	.551	96.446
29	.179	.498	96.944
30	.172	.479	97.422
31	.170	.471	97.893
32	.160	.445	98.338
33	.156	.435	98.773
34	.151	.420	99.193
35	.148	.412	99.605
36	.142	.395	100.000

Figure 2

Factors and eigenvalues for Section IV
of the ACT-SAA

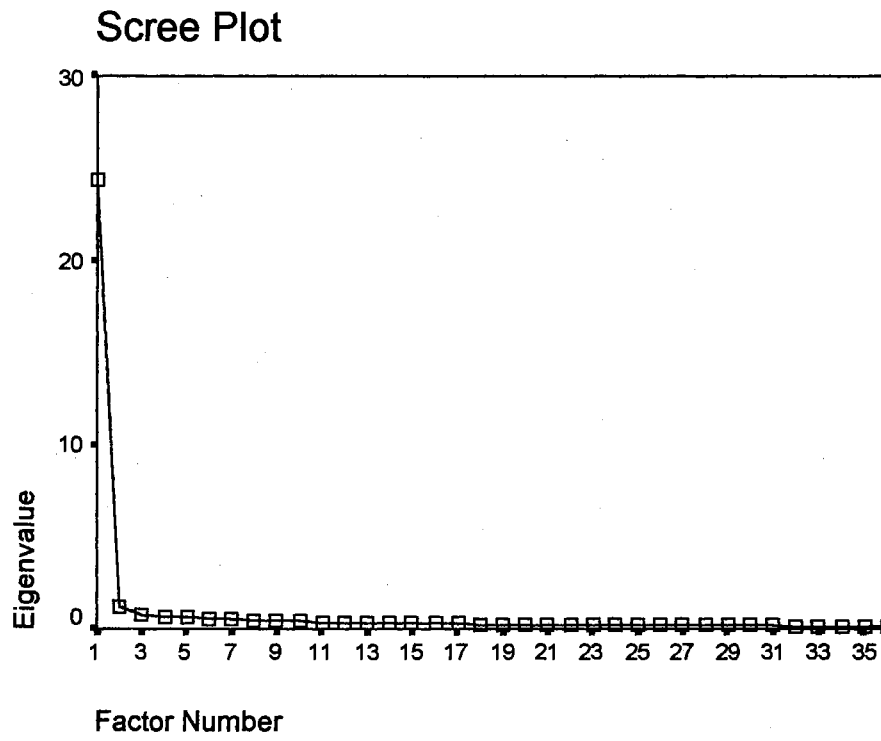


Table 9

Factor Matrix: Section IV of the ACT instrument

	Factor	
	1	2
Q401	.659	-.141
Q402	.828	-.265
Q403	.855	-.158
Q404	.844	-.245
Q405	.771	-9.789E-02
Q406	.863	-.240
Q407	.856	-.126
Q408	.781	-.241
Q409	.779	-4.017E-02
Q410	.802	8.374E-02
Q411	.805	6.740E-02
Q412	.810	-1.103E-02
Q413	.826	9.122E-02
Q414	.852	-1.259E-02
Q415	.855	.125
Q416	.766	.199
Q417	.735	-5.067E-02
Q418	.843	.110
Q419	.823	-5.246E-02
Q420	.793	.105
Q421	.840	.180
Q422	.835	9.277E-02
Q423	.870	.179
Q424	.798	9.971E-02
Q425	.831	.244
Q426	.846	.213
Q427	.760	.292
Q428	.808	.284
Q429	.775	.144
Q430	.858	-.100
Q431	.843	-.252
Q432	.888	-1.630E-02
Q433	.770	-6.248E-02
Q434	.868	-4.575E-02
Q435	.787	-.205
Q436	.882	-.132

Table 10

Results of factor analyses: Y and Z

Analysis	Eigenvalue	% of Variance Explained	Range of Factor Loadings
Full Data Set	27.396	67.768	.659 - .888
Y	24.528	68.133	.652 - .894
Z	24.373	67.704	.652 - .885

Step 3. Assess content validity of the ACT instrument. Content validity was assessed through expert opinion as defined in Chapter III. Each question was independently examined. Seventy-eight items were examined by experts. Of these 78 items, 59 were considered relevant by all four experts. Table 11 provides information regarding the items that did NOT meet unanimous approval. Only four items were not approved by a majority of the advisors. The information provided in Table 11 presents the concern experts have regarding personal counseling associated with academic advising. Many of the questions not approved by all four experts addressed the issue of discussing personal problems. Written comments were provided by one of the experts and are provided verbatim in the paragraph below.

Section I: “If I were filling out this survey I would not list my SSN. That’s just a no-brainer.”

Section III: “Questions 7 and 9-18 are not necessary and can fall under a referral question. Although these issues do arise during advisement any medium to large institution has separate offices to assist students in these issues.”

Section IV: “I guess these questions are technically valid but there are too many of them and some are vague.”

Section V: “A and B can be combined if they are included at all. These questions are confusing because all of a sudden the students are being asked about their previous advisor instead of their current advisor.”

Table 11

Items not approved for content validity by all four experts

Item	"Yes"	"No"
Social Security Number (Q1A)	1	3
Racial/Ethnic Group (Q1C)	3	1
For what primary purpose did you enter this institution? (Q1E)	3	1
Marital Status (Q1G)	3	1
What is your residence classification at this college? (Q1K)	3	1
Indicate your current college residence? (Q1M)	2	2
Finding a job after college/job placement? (Q315B)	3	1
Dealing with personal problems? (Q318B)	2	2
Helps me identify the obstacles I need to overcome to reach my educational goals. (Q415)	3	1
Is on time for appointments with me. (Q417)	3	1
Clearly defines advisor/advisee responsibility. (Q418)	3	1
Is willing to discuss personal problems. (Q420)	2	2
Anticipates my needs. (Q421)	2	2
Helps me to examine my needs, interests, and values. (Q423)	3	1
Encourages me to talk about myself and my college experiences. (Q425)	3	1
Is knowledgeable about courses outside my major area of study. (Q429)	3	1
Has a sense of humor. (Q436)	3	1

Note: items which were approved by all four experts are not listed.

Short form: Steps four through eight.

Step 4. Select items. In selecting items for the short form of the *ACT-SAA* several criteria were taken into consideration; completion time of the instrument and length of the instrument. Items were selected from Sections I through V of the ACT instrument. The purpose of creating a short form was to reduce the amount of time necessary for students to complete the instrument. Thus, the researcher opted for an overall length of about one third the original form. This decision was based on an identified optimal time of about five minutes. This parameter of five minutes was determined by the researcher of this study along with the directors of student services participating in the pilot of the short form.

Section I of the ACT instrument includes demographic questions used to describe the sample being surveyed. Originally, this section included 15 items. Since these items were not scaled, the researcher relied on her professional background to choose the appropriate questions. Items B (*Age*), C (*Racial/Ethnic Group*), and F (*Sex*) were used in the short form so that demographic data would be collected. This information would allow an academic advising unit to determine whether or not sample data reflected the population being served. Demographics regarding the student population which is served by a particular advising unit would be available through the institution to ensure a representation of the overall student population. Additionally, students were asked to *indicate their adviser and major* which were questions O and N, respectively, on the original form. Question D (*Indicate your current class level*) was also retained. These three questions (O, N, and D) were included due to their relevance to academic advising.

All three questions could be used to see if a particular subpopulation was being properly served.

Section II included four original questions. Question A (*How well does the academic advising system currently offered by this institution meet your needs?*) was not used because the researcher felt this question could be answered using items selected from Sections III and IV. For example, Section III of the ACT instrument consists of questions to assess advising needs and to determine whether such needs are being met. Question B (*Which of the following best describes your current academic advisor?*) was also omitted from the short form since this information could be determined by the researcher before the instrument is administered. Careful record keeping by the evaluator of where and to whom the instrument is administered eliminates the need for this question. Additionally, students were asked to identify their advisor and major. This should indicate the type of advisor. Questions C (*How much input did you have in the selection of your current advisor?*) and D (*How long have you had your current academic advisor?*) were both selected for use on the short form due to the importance of the information and the inability to obtain this information from another question.

Selection of questions from Section III were originally to be based on statistical reliability. That is, selected items within each scale were to be the most reliable. However, all items appeared equally reliable (See Step 1 Results), thus selected questions were based on content. Further support for basing item retention on content rather than reliability can be seen in the *Item-total correlation* (shown in Table 2). Item-total correlations indicate the strength of the relationship between the item and the overall scale.

As noted in the table, these item-total correlations all show a strong positive correlation with the overall scale. This indicates that each item is measuring academic advising needs in a manner similar to the measurement when using the entire scale. Additional support for including items based on content was provided by empirical analyses. Based on thorough description of coefficient alpha (Popham, 1990), a procedure for assessing reliability was logically determined (Fuqua, personal communication, 1999). This procedure consisted of two analyses to determine the range of possible alpha coefficients when selecting any six items within the original scale. In these analyses the bottom six items with regard to *Item-total correlation* were selected. The reliability of the scale containing only these six items was assessed. This procedure was then used with the top six items. This procedure provided a range of possible alpha coefficients when selecting any six of the 18 items in Section III. Results of these analyses indicate a possible range of alpha to be between .8622 and .9249. Further support for selecting items based on content is seen through the principal axis factor analysis. The range of factor loadings was .662 to .829, exceeding the $> .400$ standard suggested by Hatcher (1996). Item selection was thus based on content and inter-item correlations. The goal was to select questions that covered different content. This was reflected by items that did not inter correlate or suggest redundancy. The final questions chosen were Q301B, Q302B, Q310B, Q312B, Q315B, and Q318B. Translations for each question are provided in Table 1 of this chapter.

The items in Section IV had the same high levels of reliability for each question. Refer to Table 4 for the high overall reliability of Section IV as well as the extremely high *Alpha if item deleted* for each item in the scale. Once again *Item-total correlations* were

very high. Therefore, the researcher conducted two more reliability analyses to determine the range of statistical reliability resulting from a choice of any twelve (one third of the items) of the 36 items within the original scale. The bottom twelve and top twelve based on *Item-total correlation* were chosen for analysis. These analyses determined that selecting any twelve of the 36 items in the original scale would lead to an overall reliability between .9396 and .9693. All items loaded above the .400 standard on the single impressions of your advisor factor of the scale. Factor loadings for these 36 items ranged from .659 to .888. Once again, items were chosen based on content and inter-item correlations. The goal was to retain questions diverse in content that were not highly correlated with each other. The following items were chosen: Q403, Q406, Q407, Q408, Q409, Q411, Q414, Q419, Q426, Q430, Q434, Q436. Translations of each item are provided in Table 3 of this chapter.

Section V consisted of non-scaled items which added information to the overall instrument. To limit space and to reduce administrative time, the researcher chose only those questions which appeared useful in planning and delivering high-quality advising services. Items which did not provide feedback in an area within the control of the administrators of an academic advising unit were deleted. Questions C (*During the past year, how often did you meet with your advisor?*), D (*Do you feel the number of meeting was sufficient for your needs?*), and E (*How much time do you usually spend in each meeting with your advisor?*) were selected for inclusion on the short form.

In conclusion, a variety of methods were used to select items for the short form of the *ACT-SAA*. The ACT instrument offers five different sections with different types of

questions, thus an individual approach was required to select items from each section. The physical size of the short form of the instrument was limited to two sides of one 8 ½ by 11 sheet of paper, a parameter set forth by the researcher for the convenience of students and administrators in to aid in ease of completion and to assist professional administration of the instrument. Thirty-five items were included in the short form; a reduction of 61 from the original 96 items on the full ACT instrument.

Step 5. Pilot test the short form. Three colleges participated in the pilot testing of the short form. The College of Business provided 54.3 percent of the participants, the College of Arts and Sciences provided 26.6 percent of the participants, and the College of Engineering provided 19.1 percent of the participants. Of the 304 students completing the short form, only 8.9 percent were freshmen. Therefore, the target of non-new freshmen was met. Other class levels were represented in the sample as follows: sophomores (41.1%), juniors (38.2%), and seniors (10.5%). The sample was largely traditional in age with 81 percent falling between the ages of 19 and 22. Only 6.3 percent were over the age of 25. The sample was reportedly 38.2 percent male, 27 percent female, with 34.8 percent not responding to gender. With regard to ethnicity, the sample was 80 percent Caucasian, 7 percent Native American, 3.6 percent African American , with less than 2 percent in each of the following groups: Mexican American, Asian American, Hispanic or Latino, and other.

Step 6. Assess content validity of the short form. Content validity was assessed through expert opinion as defined in Chapter III. Each question was independently examined. Twenty-nine items were examined by experts. Of these 29 items, 26 were

considered relevant by all four experts. Only three items did not meet unanimous approval by the experts. *Racial/ethnic group* met the approval of three out of the four experts reviewing the instrument for content-related validity. *Finding a job after college/job placement* also met the approval of three out of the four experts. *Dealing with personal problems* met the approval of only two experts.

Step 7. Assess reliability of the short form.

Reliability of the short form was assessed in a manner similar to that used in the original survey. A Cronbach's alpha reliability analysis was conducted on the six item scale which replaced Section III of the full ACT instrument. Reliability appeared fairly high with an alpha coefficient of .9134. However, only 14 respondents completed Section III of the survey correctly, making these results illegitimate.

Items taken from Section IV closely resembled Section IV of the full instrument and included twelve of the original questions. Of the 304 respondents, 93 answered every question in this section with an answer other than *Does not apply*. Therefore, data were available to assess the reliability scale. Cronbach's alpha ($\alpha=.9625$) indicated high internal consistency reliability. In addition, *Item-total correlations* were fairly high ranging from .7308 to .8873. The lowest *Alpha if item deleted* was .9570 indicating no item was significantly more important than another.

Step 8. Assess validity of the short form.

As with reliability, construct validity of the short form is impossible to assess for the section resembling Section III of the original instrument. With an actual N of only 14, results from such an analysis would be indefensible.

Ninety-three of the 304 respondents answered every question in this scale with an answer other than *Does not apply*. A principal axis factor analysis was conducted to determine the number of constructs being measured by the twelve item scale. As with the full ACT instrument, the analysis confirmed one construct was being measured by the items within the scale. The single factor had an eigenvalue of 8.532 accounting for 71.097 percent of the total variance. All items loaded on the single factor at the $> .400$ standard suggested by Hatcher (1996). Factor loadings ranged from .747 to .907. The analysis served as a confirmatory factor analysis upholding the inference the scale only measures one construct, "Impressions of your advisor".

CHAPTER V
DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE
RESEARCH

Summary

In today's competitive market for undergraduate students, student satisfaction with all services, especially academic advising, is critical to institution survival. The excellence of academic advising is vital to the survival of any post-secondary institution. This important function must be closely monitored for quality. Evaluation of academic advising services is key to the monitoring of quality. One portion of evaluation of academic advising services is the survey instrument which may be used to collect data from students regarding their satisfaction with the services. ACT offers such a survey through their evaluation and survey services. The *ACT Survey of Academic Advising* (ACT-SAA), a widely used instrument, serves as a tool to evaluators when collecting feedback from students regarding their satisfaction.

The *ACT-SAA* is one of the most widely used instruments used to gather feedback regarding student satisfaction with advising services. Since 1993 the ACT instrument has been administered at more than 87 colleges to more than 40,000 students. This group of colleges represents large and small, public and private; and technical 2-year, and 4-year

institutions from 29 states (ACT, 1996/97). Although this instrument is widely used, there has been no formal assessment of the psychometric properties of this instrument from associates outside of the ACT organization. Certainly the need for reliable and valid measures are necessary to accurately gather feedback regarding student satisfaction with academic advising. This need for reliable and valid measures combined with the wide use of the instrument justifies this study.

There are two purposes of this research: (1) Assessment of selected psychometric properties of the ACT-SAA, and (2) Development of a short form (SF-SAA) of the ACT-SAA . This study is justified through the lack of outside assessment of the ACT-SAA. While literature is available regarding the ACT-SAA, it is primarily written by associates of ACT. Additionally, the evaluation and survey services offered by ACT includes several instruments, some of which are available in a short form. At the time of this study, such a short form was not available for the ACT-SAA. This study will provide a “first draft” of such an instrument.

This research was broken down into three main components: an evaluation of academic advising services which took place in the Spring of 1997 at a large midwestern land grant university; assessment of the selected psychometric properties of the ACT-SAA; and development of the SF-SAA. The evaluation which took place in the Spring of 1997 was conducted in the centralized advising unit of the College of Education at the large midwestern land grant university. Students surveyed were undergraduates primarily majoring in teacher education.

Assessment of the psychometric properties of the ACT-SAA was conducted using archival data provided by ACT. Those surveyed included students from both two-year and four-year, public and private institutions. The data were collected at over eighty different colleges and universities. Internal consistency reliability of the ACT-SAA was assessed using Cronbach's alpha lower estimate of reliability. Construct validity was assessed through exploratory and confirmatory factor analyses. Content validity was assessed through expert opinion.

Development of the SF-SAA was completed through careful selection of items from the ACT-SAA and subsequent piloting of this newly developed instrument. Students participating in the pilot of the SF-SAA were undergraduates at a large midwestern land grant university from the colleges of Arts and Sciences, Engineering, and Business Administration. This chapter will discuss the findings of the two purposes of this study as they relate to the previously cited literature. Additionally, conclusions will be drawn regarding the internal consistency reliability, the construct validity, and the content validity of the ACT-SAA. Finally, a critique of the newly developed SF-SAA will be presented along with speculation of its utility.

Discussion

Assessment of psychometric properties

This study attempted to provide information regarding the internal consistency reliability, the construct validity, and the content validity of the ACT-SAA. While the content validity was assessed for the entire instrument, the internal consistency reliability

and the construct validity were only assessed for Sections III and IV, the Likert-scaled portions of the ACT-SAA. Therefore, Sections III and IV are discussed when addressing internal consistency reliability and construct validity of the ACT-SAA and the SF-SAA. Assessment of these two psychometric properties for the other sections in the instrument was beyond the scope of this study. Content validity is addressed for the entirety of both the ACT-SAA and SF-SAA.

Internal consistency reliability

At first glance, both Section III and Section IV of the ACT-SAA appear to be highly reliable with very high internal consistency reliability coefficients. However, upon further investigation, the seemingly high reliability of Section III is brought into question. Analysis of Cronbach's alpha coefficient uses only student cases which complete each item across the scale. In the case of Section III of the ACT-SAA, about one quarter of the cases completed each item across the scale. The researcher of this study determined the results could only be acknowledged as tentative due to the low percentage of cases included in the analysis.

Further information about Section III was uncovered during this study. Section III is a series of 18 two-part questions. When answering questions, students should only answer part B if they answered *Have Discussed* in Part A. As a result, few students answered every question in Part B of Section III of the ACT instrument. To put this problem in perspective, it is necessary to take a closer look at the problem. Hatcher (1996) suggests that in order to conduct an analysis you should have the greater of 100 cases or five times the number of cases to variables being analyzed. With this 18-item scale, that

equates to 90 cases. The 568 instruments collected at the large midwestern land grant university only yielded seven complete cases for analysis.

Section IV also appeared highly reliable with a very high reliability coefficient. Fortunately, approximately 55 percent of the cases completed every item across the scale. With this large number of students completing the scale, the researcher of this study determined the results yielded valuable information regarding Section IV of the ACT-SAA.

Construct validity

Problems similar to those encountered in assessing the internal consistency reliability of Section III of the ACT-SAA were also encountered when assessing the construct validity. While it appeared Section III of the ACT-SAA measured one construct, and this was confirmed through additional factor analyses, the low percentage of cases used in the analyses suggested tentative results. As with internal consistency reliability, the results of the analyses conducted to assess construct validity of Section III of the ACT-SAA are considered indefinite.

Factor analysis of the 36 items in Section IV resulted in only one factor being extracted. Confirmatory factor analyses using a random sample of the entire data set were conducted. These subsequent analyses also resulted in one extracted factor indicating Section IV is measuring one construct, "Impressions of your advisor".

Content validity

Content validity of the entire ACT-SAA was assessed through expert opinion. Four experts reviewed the instrument. Most questions on the instrument received full

support from each of the four experts. Section I, used to collect demographic information, was assessed in terms of content validity. While most questions were considered relevant by experts, some questions were considered unnecessary, such as “social security number”. Experts unanimously agreed that each item within Section II, “academic advising information”, was relevant to academic advising. Content validity of Section III, “academic advising needs”, was supported by all four experts with only two of the 18 items not considered valid by all four experts. Content validity of Section IV, “impressions of your advisor”, is also supported. All items were considered relevant by a majority of the experts reviewing the instrument. The items in Section V, “additional advising information”, were considered relevant to academic advising by the four reviewing experts.

Relationship to academic advising

Academic advising has been found to be the single most important factor in student attrition (Backhus, 1989). As a result, evaluation of academic advising is extremely important (Hanson and Raney, 1993). Institutions of higher education need information about the quality of their advising services in order to effectively administer academic advising. Credible evaluation of academic advising services depends on valid and reliable measures. This research provides information regarding the reliability and validity of the ACT-SAA, a widely used instrument utilized in the evaluation of academic advising. The connecting concepts that lead from the relationship of academic advising and retention to the importance of reliable and valid measures of academic advising services are critical to understanding the impact of this research.

Assessment of internal consistency reliability and construct validity are important to experts in the field of academic advising. To make this point, it is necessary to unite the principles cited in the literature review. Academic advising and retention are inextricably intertwined. Hoefft (1994) cited nine sources supporting the close relationship between quality advisement and student retention. Glennen, Farren, and Vowel (1996) take it a step further by making the connection between retention and fiscal stability. This concept certainly makes sense since fiscal resources depend on credit hour production. This concept also emphasizes the importance of evaluation of advising services. The ACT-SAA is considered to be widely used with more than 80 institutions using the instrument to measure student satisfaction with advising services (ACT, 1997). This widespread use of the ACT-SAA justifies assessment of the psychometric properties of the instrument. The current research provides assessment of three psychometric properties of the ACT-SAA. This information is important to experts in the field of academic advising as psychometrically sound measures are extremely important to the evaluation process. Most useful to the field of academic advising is the determination that both internal consistency and construct validity could not be assessed for Section III.

The assessment of content validity is important to experts in the field of academic advising. Geis and Huston (1995) explain the wide variety of responsibilities given to academic advisors. In addition to assistance with scheduling classes, academic advisors also provide information regarding study habits, understanding professors, and exam preparation. Byrd (1995) contends an advisors most important responsibility is that of a referral specialist. Good academic advising will teach the student how to utilize resources

such as career services, financial aid, and personal counseling. The current research provides assessment of content validity of the ACT-SAA. This is an important contribution to experts in the field of academic advising. This research provides vital judgment of the ACT-SAA by reviewing the instrument for content important to experts in the field of academic advising.

Development of the short form

The second purpose of this research was to develop a short form of the *ACT-SAA* (SF-SAA). As an academic advisor, the researcher of this study found feedback gathered with the *ACT-SAA* to be useful. While she found the feedback useful, she also found the instrument to be too long and intrusive to the advising process. Students complained of having to complete an instrument that took nearly 15 minutes to finish. While 15 minutes may seem like a fairly short time, it represents half of the time students plan on spending in the advising center. Appointments during the Survey of 1997 were scheduled each half hour. The question then becomes, "Can this be done in less time and with less student effort?" Throughout the field of educational measurement, short forms have been used to accomplish the same task with less time and effort. Kaufman (1994) cites development of short forms for the Wechsler Intelligence Scale for Children III (WISC-III) for the purpose of brevity to administer and score. Kaufman also states reliability and validity of these short forms must be comparable to the long form in order to be useful. The quest began with this study to develop a short form of the ACT instrument that held the same level of reliability and validity as the long form.

Usefulness of a short form of the *ACT-SAA* became apparent during the evaluation conducted by the researcher of this study in 1997. Problems with incomplete data and uncooperative participants revealed the need for a more efficient way to collect the data. Similar forms to the ACT instrument exist and have been used in other evaluations of academic advising. For example, Stolar (1994) cites a 30 item questionnaire developed for evaluation of academic advising. Severy (1994) also describes an evaluation of academic advising using a 19 item questionnaire.

Selection of items

Items for the SF-SAA were selected based on content. Initially, the researcher of this study intended to select items based on their reliability coefficients and their level of contribution to the construct being measured. However, analyses of these psychometric properties revealed that the items were very close in both reliability and validity. Hence, the researcher decided to retain questions for the short form based on content.

The number of items to retain was based on a predetermined time limit of five minutes for completion of the SF-SAA. While the information from such a survey is useful, even the administrators wanting the information were apprehensive. Directors of student academic service units participating in this study were leery to participate in the piloting of the short form due to concerns it would take too much time and become an obstacle rather than a tool toward excellent student services. One director refused to participate unless the time it took to complete the instrument was kept to five minutes or less.

This research provides the first step in developing a short form of the ACT-SAA. This is advantageous to experts in the field of academic advising. The current study paves the way to an instrument more user friendly than the ACT-SAA. Additionally, it maintains the advantage of being the property of a national testing company, capable of marketing the instrument and making it available on a nationwide and worldwide basis.

Psychometric properties of the SF-SAA

Reliability. Internal consistency reliability of Section III was not assessed due to the low number of students completing every item across the scale. Of the 164 who completed Section III properly, only 14 individuals completed Part B of every item in the scale. This problem is equivalent to the problem faced when assessing the construct validity of Section III of the full instrument. The difference being that the researcher did not have access to the large sample necessary to actually conduct the analysis. Reviewers of this research may be curious as to why questions from Section III remained on the SF-SAA, since it was determined the scale on the long form could not be assessed for internal consistency reliability or construct validity. The fact is, the severe problems with Section III were not obvious until the researcher attempted to assess the reliability and construct validity of the SF-SAA. This exercise in fact prompted further investigation into the actual number of complete cases yielded with the ACT archival data.

Internal consistency reliability of Section IV of the short form also paralleled that of the long form. Reliability of this section of the short form is strongly supported by this research. This conclusion illustrates the ability to obtain equally reliable feedback with fewer items than provided with the full ACT instrument.

Validity. As with reliability, construct validity of Section III of the short form could not be assessed due to the low number of students completing every item across the scale. Problems that occurred in the long form were unfortunately carried over into the short form through inclusion of this scale.

Construct validity of Section IV of the short form was supported through this research. One construct, “Impressions of your advisor”, was measured by the 12-item scale in Section IV. This conclusion supports the theory that equally useful information can be obtained using a short form (Kaufman, 1994) as opposed to the full *ACT-SAA*.

Content validity of each item was reviewed by the same four experts that reviewed the full instrument. Similar conclusions resulted. Only three of the 30 items in the short form did not receive support from all four experts. This is an improvement from the long form. Ninety percent of the items within the short form received full support from all four experts. This is an improvement compared to the 76 percent of items in the long form receiving support from all four experts. As with reliability and construct validity, the results of this analysis parallel that of the full instrument. Overall, content validity was supported by the experts. The expert submitting written comments regarding the full instrument wrote an additional comment stating most of her concerns had been addressed in the “New and Improved” survey.

Relationship to academic advising

Administrators of advising services would greatly benefit from these findings. The need for a short form combined with the similarity in reliability and validity between the full instrument and the short form justify the further development and subsequent use of

this short form. Information regarding the psychometric properties of the SF-SAA along with further development of this short form would provide administrators with an instrument more flexible and user friendly than the ACT-SAA.

Conclusions

Assessment of psychometric properties

Three psychometric properties of the ACT-SAA were assessed in this research. Internal consistency reliability and construct validity were examined for Sections III and IV of the ACT-SAA. Content validity was examined for the entire instrument.

Results were inconclusive regarding the internal consistency reliability and construct validity of Section III of the ACT-SAA. Due to the format of these questions, relatively few cases as compared to the entire data set were useful in analyses. As previously stated, valid and reliable measures are an important part of evaluation. Since the reliability and construct validity of this portion of the ACT-SAA could not be assessed with confidence, it should be modified. The content of these questions should be reformatted in such a way that the psychometric properties of the scale can be assessed.

This research suggests a need for a thorough investigation as to why students are not completing each item across the scale in Part B of Section III. Some possibilities come to mind. The directions in Section III are complex compared to those in the other sections of the instrument. Students only complete Part B if they mark "Have discussed" in Part A. Previously, we established that students do not want to spend a long period of time

completing surveys as was experienced during the Evaluation of 1997. The complex directions in Section III combined with the hurried timetable may cause confusion resulting in many students not correctly completing the items within the scale.

Another possible conclusion could be that students are following the directions exactly. If this is the case, the question then becomes “Why aren’t these students discussing these issues with their advisors?” It is possible students feel uncomfortable discussing these topics with their advisor. An even worse problem may be that advisors make no attempt to discuss these topics with their advisees. In either case, the reason as to why these issues are not being discussed in the advising session is currently not uncovered by the items within Section III.

Section IV was found to be highly reliable and have strong construct validity. This research supports the use of the items in Section IV of the ACT-SAA. With such strong reliability and construct validity in Section IV, a possible solution to the problems in Section III would be to include the content of questions in Section III in Section IV. Certainly the format of Section IV makes the scale easier to assess.

Overall, the content validity of the ACT-SAA is supported through this research. Previously presented expert opinion supports a vast majority of the items on the ACT-SAA. One specific item that was not supported was the very first item on the instrument, “social security number”. Experts did not find this item to be relevant to academic advising. This research suggests complete elimination of this item. Except for this item, all items were supported by at least half of the experts with all but four items being supported by a majority of the experts. Content validity of this instrument appears solid.

Decisively, this research concludes the ACT-SAA is a valuable instrument with the exception of the items in Section III. This scale brings problems to the instrument and should be considered by ACT for modification. After reformation of these items, the entire scale should either be reformatted or the items altered and included in Section IV.

Development of a short form

Certainly, the purpose of developing a short form of the ACT-SAA was to make available an instrument that would produce the same benefits as the long form while increasing the ease of administering the survey. This research succeeded in developing such an instrument. This research concludes a short form of the ACT-SAA is preferred to the long form due to the decrease in time it takes to complete the instrument and the increase in content validity.

The SF-SAA is more advantageous because of decreased time it takes to complete. Discussion with directors of student services led to the decision to create an instrument that would take no more than five minutes to complete. Fortunately, the short form was able to meet these guidelines through the elimination of nearly two-thirds of the original questions. The estimated five minute time limit as identified by the directors of student services, and experts in the field of academic advising, provided enough time for students to complete the new form. The goal of developing an instrument that mirrored the full ACT instrument was believed to be met. With 30 items on the newly developed instrument, a reduction of nearly two-thirds from the original 79 items, students were able to provide the same approximate level of quality feedback in about one-third the time. Additionally, with fewer items and less paper to manage, administrators were able to

collect data quickly with few complaints from students. The full ACT instrument was cumbersome in comparison to the short form. Surveys conducted during the pilot of the new short form received few complaints from academic advisors in comparison with the complaints received during the evaluation at the large midwestern land-grant university of 1997.

The SF-SAA is preferred to the ACT-SAA due to the increase in content validity. While internal consistency reliability and construct validity of the SF-SAA was parallel to the ACT-SAA, content validity of the SF-SAA was stronger than the ACT-SAA. Through careful examination of the content of each item within the ACT-SAA, this study provided information to assemble items from the ACT-SAA that acquired greater support from experts regarding the content validity of the instrument.

As with the ACT-SAA, items from Section III should be modified from the SF-SAA. Unfortunately, the problems associated with the items in this scale were not evident until after they had been included on the newly developed short form. As a result, the SF-SAA brought with it the same problems which unknowingly already existed in the ACT-SAA.

This research provides an excellent “first step” to developing a short form of the *ACT-SAA* (SF-ACT). While it would have been preferable that the problems existing in the original instrument had been eliminated in the SF-SAA, this newly developed short form brings the advantages of decreased time to complete and increased content validity. This research provides a clear direction to continue the development of this instrument.

Elimination of Section III, reformatting of these items, and subsequent pilot testing will serve to further enhance the usefulness of the SF-SAA.

Recommendations for further research

The following research recommendations are presented as a result of this study.

1. The *ACT-SAA* and the newly developed short form should be restructured to exclude Section III. This section is difficult to complete due to the complex nature of two-part questions. Additionally, it was impossible to assess the psychometric properties of this section knowing that less than half of the sample are included in the assessment of the reliability and validity. After exclusion and/or reformatting of these questions, reliability and validity should be retested and compared between the *ACT-SAA* and the *SF-SAA*.
2. Depending on how the researcher visualizes the object of measurement, an entirely different approach could be taken to assessing the psychometric properties of the *ACT-SAA*. In the current study, the object of measurement was the student (e.g. their satisfaction). An additional assessment could be conducted if the object of measurement were the advisor (e.g. their performance). However, this analysis would require five advisors for each question on each scale, requiring a much larger sample size.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL VERIFICATION

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date: November 1, 1999 IRB #: ED-00-173

Proposal Title: "ACT SURVEY OF ACADEMIC ADVISING: ASSESSMENT OF THE
PSYCHOMETRIC PROPERTIES AND DEVELOPMENT OF A SHORT
FORM"Principal Investigator(s): Janice Williams
Leigh GoodsonReviewed and
Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

Signature:



Carol Olson, Director of University Research Compliance

November 1, 1999

Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX B
ACT SURVEY OF ACADEMIC ADVISING

SURVEY OF ACADEMIC ADVISING

DIRECTIONS: The information you supply on this questionnaire will be kept confidential. This information will be used for research purposes and to help improve the academic advising program at the college. However, any question requires information that you do not wish to provide, you may skip it.

Please use a ballpoint pen, pencil, or felt-tip pen to fill in the oval indicating your response. Do NOT use a highlighter, eraser, or sharpener. Mark your answers in the appropriate bubbles.

SECTION I - BACKGROUND INFORMATION

Before you verify your Social Security number, be sure to check the top of Block 1. Then, in the columns below, each box indicates the appropriate response.

A SOCIAL SECURITY NUMBER (Verification Number)

1	2	3	4	5	6	7	8	9	0

B AGE

18 or Under
 19
 20
 21
 22
 23 to 25
 26 to 30
 31 to 35
 36 to 40
 41 or Older

C RACIAL/ETHNIC GROUP

Hispanic/Latino
 White American Indian, Alaska Native, or Native Hawaiian
 Black or African American
 Asian American or Asian Pacific Islander
 Middle Eastern, North African, or South Asian
 Other

D INDICATE YOUR CURRENT CLASS LEVEL

Freshman
 Sophomore
 Junior
 Senior
 Graduate/Postgraduate Studies
 Other

E FOR WHAT PRIMARY PURPOSE DO YOU ENTER THIS INSTITUTION? (Select Only One)

To Obtain a Degree
 To Obtain a Certificate or Diploma
 To Obtain a License
 To Obtain a Certificate of Completion
 To Obtain a Certificate of Achievement
 To Obtain a Certificate of Proficiency
 To Obtain a Certificate of Completion of a Program
 To Obtain a Certificate of Completion of a Course
 To Obtain a Certificate of Completion of a Program
 To Obtain a Certificate of Completion of a Course
 To Obtain a Certificate of Completion of a Program
 To Obtain a Certificate of Completion of a Course

F WHAT IS YOUR RESIDENCE CLASSIFICATION AT THIS COLLEGE?

Resident Student
 Non-Resident Student
 International Student
 Other

G MARITAL STATUS

Married (including Divorced and Widowed)
 Single
 Married (with Annulment)
 Other

H WHAT IS YOUR CURRENT EMPLOYMENT STATUS?

Full-Time Student
 Part-Time Student
 Other

I WHAT WAS THE LAST TYPE OF SCHOOL YOU ATTENDED PRIOR TO ENROLLING IN THIS INSTITUTION?

High School
 Vocational/Technical School
 Junior College
 Other

J INDICATE THE NUMBER OF HOURS PER WEEK YOU ARE CURRENTLY EMPLOYED

None
 1-9
 10-19
 20-29
 30-39
 40-49
 50 or More

K WHAT IS YOUR RESIDENCE CLASSIFICATION AT THIS COLLEGE?

Resident Student
 Non-Resident Student
 International Student
 Other

L INDICATE YOUR COLLEGE POINT AVERAGE

0.00 to 0.49
 0.50 to 0.99
 1.00 to 1.49
 1.50 to 1.99
 2.00 to 2.49
 2.50 to 2.99
 3.00 to 3.49
 3.50 to 3.99
 4.00 to 4.49
 4.50 to 4.99
 5.00 or More

M INDICATE YOUR COLLEGE MAJOR

Business Administration
 Education
 Health Services
 Humanities
 Life Sciences
 Mathematics
 Physical Sciences
 Social Sciences
 Arts
 Other

N USING THE LIST OF COLLEGE MAJORS AND OCCUPATIONAL CHOICES INCLUDED WITH THIS SURVEY, INDICATE YOUR MAJOR AREA OF STUDY. WRITE THIS CODE IN THE BUBBLE AT THE TOP OF BLOCK 1, AND BLACKEN THE APPROPRIATE BUBBLE FOR EACH OF THE MAJOR AREA OF STUDY. HAVE MORE THAN ONE MAJOR AREA. SELECT THE ONE CODE THAT YOU FEEL BEST DESCRIBES YOUR EDUCATIONAL PROGRAM.

Business Administration
 Education
 Health Services
 Humanities
 Life Sciences
 Mathematics
 Physical Sciences
 Social Sciences
 Arts
 Other

O INDICATE YOUR ADVISOR

Academic Advisor
 Career Advisor
 Other

A C O L L E G E U S E A S O L T P E N T O F I L L I N T H E B U B B L E S

INFORMATION

Please respond to the following questions about your institution's Academic Advising System. Note that the questions refer to the academic advising program only, not to retention or degree counseling. If you do not currently have an academic advising program, please check that box in Section VI on page 4 of your 2012-2013 Institutional Report. For more information on the questions, please refer to the questions in the 2012-2013 Institutional Report. For more information on the questions, please refer to the questions in the 2012-2013 Institutional Report.

A HOW WELL DOES THE ACADEMIC ADVISING SYSTEM CURRENTLY OFFER BY THIS INSTITUTION MEET YOUR NEEDS?

Very well
Somewhat well
Somewhat not well
Very not well

B WHICH OF THE FOLLOWING BEST DESCRIBES YOUR CURRENT ACADEMIC ADVISOR?

Faculty Member
Former Faculty Member
Graduate Student
Former Graduate Student
Former Student
Former Staff Member
Former Student
Former Faculty Member
Former Graduate Student
Former Staff Member
Former Student

C HOW MUCH INPUT DO YOU MAKE IN THE SELECTION OF YOUR CURRENT ACADEMIC ADVISOR?

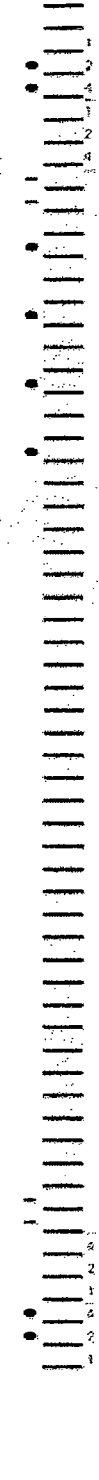
Very much
Somewhat much
Somewhat little
Very little

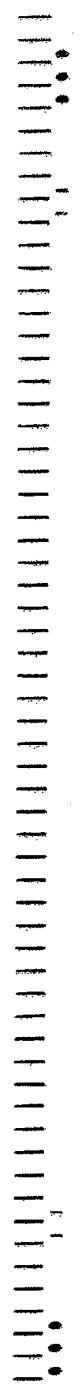
D HOW LONG HAVE YOU HAD YOUR CURRENT ACADEMIC ADVISOR?

Less than 1 year
1-3 years
4-6 years
7-9 years
10 years or more

PART A: INDICATE WHETHER OR NOT YOU AND YOUR CURRENT ACADEMIC ADVISOR HAVE DISCUSSED EACH OF THE TOPIC OR ISSUE LISTED BELOW. TOPIC OR ISSUE WILL BE DISCUSSED: 1 = YES, 2 = NO, 3 = SOMETIMES. SATISFACTION WITH ACADEMIC ASSISTANCE: 1 = VERY SATISFIED, 2 = SATISFIED, 3 = NOT SATISFIED, 4 = VERY NOT SATISFIED.

TOPIC OR ISSUE	DISCUSSED WITH ACADEMIC ADVISOR				SATISFACTION WITH ACADEMIC ASSISTANCE			
	1	2	3	4	1	2	3	4
1. EXAMPLE: ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
2. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
3. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
4. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
5. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
6. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
7. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
8. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
9. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
10. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
11. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
12. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
13. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
14. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
15. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
16. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
17. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
18. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
19. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
20. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
21. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
22. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
23. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
24. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
25. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
26. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
27. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
28. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
29. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
30. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
31. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
32. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
33. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
34. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
35. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
36. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
37. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
38. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
39. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
40. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
41. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
42. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
43. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
44. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
45. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
46. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
47. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
48. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
49. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0
50. ACADEMIC ADVISOR'S OFFICE	0	0	0	0	0	0	0	0





SECTION IV—IMPRESSIONS OF YOUR ADVISOR

Please respond to the following questions about your current academic advisor. (Circle the number that best describes your response.)

	MY ADVISOR:					MY ADVISOR:				
	DOES NOT APPLY	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	DOES NOT APPLY	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1. Keeps me up to date on my progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Is a good listener.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Encourages me to do my best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Responds to questions and requests.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Is available when I need help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Provides a variety of suggestions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Can help me understand my course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Encourages me to take my own responsibility.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Provides me with specific information about my progress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Keeps me up to date on changes in my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Advises me to refer to other faculty when I have questions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Encourages me to discuss an advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Advises me to refer to other faculty when I have questions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36. Encourages me to discuss my advisor's availability.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PLEASE PRINT NAME AND ADDRESS OF ADVISOR: _____

DATE: _____

SIGNATURE OF ADVISOR: _____

PRINT NAME OF ADVISOR: _____

ADDRESS OF ADVISOR: _____

CITY AND STATE: _____

ZIP CODE: _____

PHONE NUMBER: _____

EMAIL ADDRESS: _____

ADVISOR'S TITLE: _____

ADVISOR'S DEPARTMENT: _____

ADVISOR'S OFFICE: _____

ADVISOR'S PHONE NUMBER: _____

SECTION VI—ADDITIONAL QUESTIONS

If you indicated not of sufficient importance to answer any of the questions in Section V, please check the appropriate box in this section. If you indicated that you answered all of the questions in Section V, please check the appropriate box in this section. If you indicated that you did not answer any of the questions in Section V, please check the appropriate box in this section.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION VII—COMMENTS AND SUGGESTIONS

If you wish to make any comments or suggestions concerning this survey, please write them in the space provided below.

SECTION V—ADDITIONAL ADVISING INFORMATION

Please check the appropriate box for each of the following statements which describe your advising situation. (Note: Check the appropriate box in this section if you did not answer any of the questions in Section V.)

A HAVE YOU CHANGED ADVISING SINCE EARLIER IN THIS INSTITUTION?

Yes, Often

Yes, Somewhat

Yes, Rarely

No, Not at All

No, Not at All

B INDICATE WHICH STATEMENT BEST DESCRIBES THE REASON FOR YOUR MOST RECENT CHANGE OF ADVISOR

I changed my mind about my advisor

I needed new advising needs or my advisor was unable to help me

My advisor's time changed (moved, moved, transferred, etc.)

I was advised by my advisor to change to this advisor

I was not satisfied with my advisor

Other

C DURING THE PAST YEAR, HOW OFTEN DID YOU MEET WITH YOUR ADVISOR?

Never

Rarely

Twice

Three or Four Times

Five or Six Times

More Than Six Times

D DO YOU FEEL THE NUMBER OF MEETINGS INDICATED IN C WAS SUFFICIENT FOR YOUR NEEDS?

Yes

No

Don't Know

E HOW MUCH TIME DO YOU USUALLY SPEND IN EACH MEETING WITH YOUR ADVISOR?

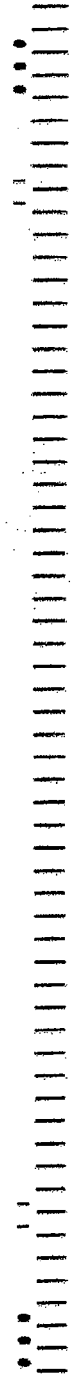
Less Than 15 Minutes

15 to 30 Minutes

30 to 45 Minutes

45 to 60 Minutes

More Than 60 Minutes



APPENDIX C

SHORT FORM OF THE ACT SURVEY OF ACADEMIC ADVISING

Survey of Academic Advising

This survey is part of a doctoral study being conducted at Oklahoma State University. The purpose of the study is to develop a short form to evaluate and therefore improve academic advising services. Participation is voluntary and you have the right to decline without penalty. If you have any questions regarding the research or your rights as a subject, you may contact Sharon Bacher, IRB Executive Secretary, OSU, 203 Whitehurst, Stillwater, OK 74075, (405) 744-5700.

By completing the survey, I understand I have voluntarily decided to participate in the study.

Indicate your college major:

Indicate your advisor:

Instructions: Blacken the single most appropriate response in each case.

Indicate your class level

- Freshman Sophomore Junior Senior Other/Special

Age

- 18 or under 23 to 25
 19 26 to 28
 20 30 to 35
 21 40 to 51
 22 prefer not to respond

Sex

- Male
 Female

Racial/Ethnic group

- African American Caucasian Asian American Other
 Native American Mexican American Hispanic or Latino prefer not to respond

How much input did you have in the selection of your current academic advisor?

- A great deal of input Some input Little or no input

How long have you had your current academic advisor?

- 0 to 6 months 1 to 1 1/2 years Over 2 years
 7 months to 1 year 1 1/2 to 2 years

Instructions: In Part A, indicate whether or not you and your current academic advisor have discussed each of the following topics. For each topic that you have discussed, indicate in Part B your level of satisfaction with the assistance your advisor has provided.

Part A: Topics discussed with advisor

- Have not discussed and do not need to
 Have not discussed but should have
 Have discussed

Complete Part B only if you have discussed the topic with your advisor.

Part B: Satisfaction with advisor's assistance

- Very Dissatisfied
 Dissatisfied
 Neutral
 Satisfied
 Very Satisfied

Part A: Topics discussed with advisor			Complete Part B only if you have discussed the topic with your advisor.	Part B: Satisfaction with advisor's assistance				
			Topic	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. My academic progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. Scheduling/Registration procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Clarifying my life/career goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. Coping with academic difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. Finding a job after college/job placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. Dealing with personal problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please go to the back of this page

Survey of Academic Advising - side 2

Instructions: Please respond to the following questions about your current academic advisor.

Strongly disagree						
Disagree						
Neutral						
Agree						
Strongly agree						
Does not apply						

1. Expresses interest in me as a unique individual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Provides a caring open atmosphere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Checks to make sure we understand each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Respects my right to make my own decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Provides me with accurate information about requirements, prerequisites, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Refers me to other sources from which I can obtain assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Encourages me to achieve my educational goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Allows sufficient time to discuss issues or problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Encourages my interest in an academic discipline	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Seems to enjoy advising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Is flexible in helping me plan my academic program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Is a helpful, effective advisor whom I would recommend to other students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During the past year, how often did you meet with your advisor? <input type="checkbox"/> Never <input type="checkbox"/> Once <input type="checkbox"/> Twice <input type="checkbox"/> Three times <input type="checkbox"/> Four or five times <input type="checkbox"/> More than five times	Do you feel the number of meetings was sufficient for your needs? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Undecided
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How much time do you usually spend in each meeting with your advisor? <input type="checkbox"/> I have not met with my advisor <input type="checkbox"/> Less than 5 minutes <input type="checkbox"/> 5 to 15 minutes <input type="checkbox"/> 16 to 30 minutes <input type="checkbox"/> More than 30 minutes

If you wish to make any comments or suggestions concerning this college or its advising program, please use the lines provided below.

Thank You For Completing This Survey
 Permission for use of items granted by The American College Testing Program. All Rights Reserved

APPENDIX D
CONTENT VALIDITY INSTRUCTIONS

Memo

To: College of Business Administration Student Services Staff

From: Leigh Goodson

Date: January 29, 2000

Re: Content-related validity of two instruments

Dear Craig, Ruth, Fran, and Barbara:

You may have seen one or both of these instruments already. Last semester I asked that advisors comment on the content validity of the instruments. After meeting with my advisor, she suggested I collect comments regarding these two instruments again. The first round was not conducted properly. I have asked Craig if you all would be willing to help with this and he graciously volunteered. What a nice guy!

Included in this packet is the following:

1. A definition of content validity
2. A definition of expert and justification for why you are an expert
3. Instructions on how you should assess content validity
4. A description of each section of the ACT Survey of Academic Advising
5. The ACT Survey of Academic Advising
6. The short form of the ACT Survey of Academic Advising with sections marked off so you can see which questions represent which sections from the full instrument

You are allowed to discuss with each other the instructions only. Do not discuss your assessment of the instrument. These are to be independent opinions. If anyone is unclear, please call me immediately at (918) 561-8470 so I can have the opportunity to clarify.

Thanks,

Leigh Goodson

1. A definition of content validity

Excerpts from Popham's Modern Educational Measurement, 1990

"Does the test deal with the content it is supposed to be measuring? For example, does a test supposedly measuring someone's knowledge of Asian history cover the important particulars of history in Asia rather than the history of Argentina or Greece? Because of this very sensible concern about the adequacy with which a test taps the topics it should, one form of validity evidence is *content-related evidence of validity*.

In general, content-related evidence demonstrates the degree to which the sample of items, tasks, or questions on a test are representative of some defined universe or domain of content. (Quoted in Popham from Standards for Educational and Psychological Testing, 1985.)

All right, you might respond, that's a pretty sophisticated way of saying, "Does the test cover the content it's supposed to cover?" But how can we determine whether a test covers the appropriate content? The key ingredient in securing content-related evidence of validity is *human judgement*.

The key term for thinking about content-related evidence of validity is representativeness. A test should represent a defined universe of content. Because of the breadth of many content fields, it is impossible for a test to measure exhaustively the universe of content involved. Thus, for a test to represent a universe of content properly, the test should sample the major aspects of that universe.

One strategy to follow in gathering content-related validity is to subject a test to a series of post facto judgements about the representativeness of its content. For example, a panel of **independent experts** can be asked to review a test, item by item, to see if the test's items satisfactorily represent the domain of content or behavior involved.

2. A definition of expert and justification for why you are an expert

For purposes of this research, experts are persons who are knowledgeable regarding the kinds of things students may want and need from academic advising services.

I have determined that you are knowledgeable for the following reasons:

1. You have been an academic advisor for more than 1 year or you have been working in an advising center for more than five years.
2. You, through communicating with students and other staff members, have an understanding of what students need and want in academic advising services.
3. You have regular student contact as part of your position.

3. Instructions on how you should assess content validity

Attached to the back of these instructions are two instruments designed to measure student opinion of the advising services. The first instrument is the ACT Survey of Academic Advising. The second instrument is a short form of the first instrument. The short form is designed by Leigh Goodson, doctoral candidate conducting this research.

To properly review the instruments please follow these directions:

- a. Read the description of the ACT Survey of Academic Advising
- b. For both surveys, assess the *item relevance* of each question by supplying a "Y" for yes or "N" for no by each item in response to the following question:

In order to measure what is supposed to be measured in this section of the instrument, should a student answer this question?

- c. Be sure to place your Y's and N's clearly next to each item in the instrument.
- d. Make any additional comments on a sheet of paper and return with the instruments. For instance, is there anything missing from either instrument?

4. Description of the ACT Survey of Academic Advising

This instrument is part of the ACT Evaluation and Survey Services. The instrument contains seven sections. Each section of the instrument is described below.

Section I. Section I asks 15 questions referring to background information. These questions request: student identification; age; ethnicity; class level; purpose for entering the institution; sex; marital status; enrollment status; last type of school attended prior to current institution; number of hours employed per week; residence classification; self-reported grade point average; college residence; major; and advisor. These questions are answered on a nominal scale. Information in this section is not used for the evaluation of academic advising, but rather for the identification of the constituency.

Section II. Section II, titled "Advising Information", has 4 questions about the institution's academic advising system. A sample question is: "Which of the following best describes your current academic advisor?" Possible answers to this question are: "Faculty member", "Advising center staff member", "Other college staff member", "College-appointed peer counselor", and "I do not have an advisor (skip to section VI)." This section is a mixture of information questions and evaluation questions. Some questions are nominal in scale. Other questions in this section are ordinal and designed to give a rating where a high score indicates greater student satisfaction.

Section III. Section III is split into two parts. Referring to academic advising needs, these 18 questions first ask if an issue has been discussed, then go on to ask students to rate their satisfaction with advisor's assistance on issues which have been discussed. Part A has three possible answers: "Have not discussed with advisor and do not need to.", "Have not discussed but should have.", and "Have discussed." Part B provides the opportunity for students to rate their satisfaction regarding each of the 18 issues. Satisfaction is reported on a 5-point Likert scale with possible answers being "Very satisfied", "Satisfied", "Neutral", "Dissatisfied", and "Very dissatisfied". Examples of questions in this section are: "Coping with academic difficulties" and "Selecting/changing my major area of study".

Section IV. Section IV also uses a 5-point Likert scale. This section solicits the student's impressions of their advisor. The top of the section says "My advisor:", indicating that each statement should begin with these two words. Possible answers to the 36 statements in Section

IV are "Does not apply", "Strongly agree", "Agree", "Neutral", "Disagree", and "Strongly disagree". Questions in this section include: "Is a good listener", "Keeps me up to date on changes in academic requirements", and "Seems to enjoy advising".

Section V. Section V asks additional advising information such as "Have you changed advisors since enrolling in this institution?" and "During the past year, how often did you meet with your advisor?". This section is used to include questions that cannot be answered with a Likert type scale. This section employs both nominal and ordinal scales.

Section VI. Section VI provides space for answers to additional questions provided by the institution. These questions could use any type of scale. Evaluators are provided space for 30 additional questions with a maximum of 12 possible answers for each question.

Section VII. Section VII is reserved for any written comments and suggestions the student may want to report.

In the postsecondary user's guide of the ACT Evaluation and Survey Services (ACT, 1995), validity of this instrument is reported to be obtained in the following ways: consultation with experts; pilot testing; ACT's experience in instrument design and construction; and literature review.



VITA

LEIGH BUNN GOODSON

Candidate for the Degree of

Doctor of Philosophy

Thesis: *ACT SURVEY OF ACADEMIC ADVISING: ASSESSMENT OF THE PSYCHOMETRIC PROPERTIES AND DEVELOPMENT OF A SHORT FORM*

Major Field: Applied Behavioral Studies

Biographical:

Education: Graduated from Union High School, Tulsa, Oklahoma in May 1986; received Bachelor of Science degree in Political Science from Oklahoma State University, Stillwater, Oklahoma in May 1990; received Master of Science degree in Communication from Fort Hays State University, Hays, Kansas, in December 1994; Completed the requirements for Doctor of Philosophy degree in Applied Behavioral Studies at Oklahoma State University, Stillwater, Oklahoma in May 2000.

Experience: Special Events and Volunteer Coordinator, Poteau, Oklahoma, May 1990 - August 1990; Caseworker and Staff Assistant, Oklahoma City, Oklahoma, January 1991 - June 1992; Guest Instructor, Hays, Kansas, Summer 1994; Admissions Counselor, Hays, Kansas, July 1992 - May 1995; Academic Counselor, Stillwater, Oklahoma, May 1995 - June 1996; Senior Academic Counselor, Stillwater, Oklahoma, June 1996 - March 1998; Private Tutor, Stillwater, Oklahoma, September 1997 - March 1998; Laboratory Instructor, Tulsa, Oklahoma, June 1999; Assistant Registrar, Tulsa, Oklahoma, April 1998 - July 1999; Assistant Dean for Students/Admissions and Recruitment (acting), Tulsa, Oklahoma, August 1999 - present.