

INFORMATION TO USERS

This reproduction was made from a copy of a manuscript sent to us for publication and microfilming. While the most advanced technology has been used to photograph and reproduce this manuscript, the quality of the reproduction is heavily dependent upon the quality of the material submitted. Pages in any manuscript may have indistinct print. In all cases the best available copy has been filmed.

The following explanation of techniques is provided to help clarify notations which may appear on this reproduction.

1. Manuscripts may not always be complete. When it is not possible to obtain missing pages, a note appears to indicate this.
2. When copyrighted materials are removed from the manuscript, a note appears to indicate this.
3. Oversize materials (maps, drawings, and charts) are photographed by sectioning the original, beginning at the upper left hand corner and continuing from left to right in equal sections with small overlaps. Each oversize page is also filmed as one exposure and is available, for an additional charge, as a standard 35mm slide or in black and white paper format.*
4. Most photographs reproduce acceptably on positive microfilm or microfiche but lack clarity on xerographic copies made from the microfilm. For an additional charge, all photographs are available in black and white standard 35mm slide format.*

*For more information about black and white slides or enlarged paper reproductions, please contact the Dissertations Customer Services Department.

U·M·I Dissertation
Information Service

University Microfilms International
A Bell & Howell Information Company
300 N. Zeeb Road, Ann Arbor, Michigan 48106

8701318

Amos, Lundee Williams

PROFESSIONALLY AND PERSONALLY INVITING TEACHER PRACTICES AS
RELATED TO AFFECTIVE COURSE OUTCOMES REPORTED BY DENTAL
HYGIENE STUDENTS

The University of North Carolina at Greensboro

Ed.D. 1985

**University
Microfilms
International** 300 N. Zeeb Road, Ann Arbor, MI 48106



PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy. Problems encountered with this document have been identified here with a check mark .

1. Glossy photographs or pages _____
2. Colored illustrations, paper or print _____
3. Photographs with dark background _____
4. Illustrations are poor copy _____
5. Pages with black marks, not original copy _____
6. Print shows through as there is text on both sides of page _____
7. Indistinct, broken or small print on several pages
8. Print exceeds margin requirements _____
9. Tightly bound copy with print lost in spine _____
10. Computer printout pages with indistinct print _____
11. Page(s) _____ lacking when material received, and not available from school or author.
12. Page(s) _____ seem to be missing in numbering only as text follows.
13. Two pages numbered _____. Text follows.
14. Curling and wrinkled pages _____
15. Dissertation contains pages with print at a slant, filmed as received
16. Other _____

University
Microfilms
International

**PROFESSIONALLY AND PERSONALLY INVITING TEACHER PRACTICES
AS RELATED TO AFFECTIVE COURSE OUTCOMES
REPORTED BY DENTAL HYGIENE STUDENTS**

by

Lundee W. Amos

**A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education**

**Greensboro
1985**

Approved by


Dissertation Advisor

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at the University of North Carolina at Greensboro.

Dissertation Advisor William Portney

Committee Members Margaret V. Hayett
John VanHoose
Caroleen T. Pitt
W. Hugh Hagan

October 1, 1984
Date of Acceptance by Committee

August 28, 1985
Date of Final Oral Examination

AMOS, LUNDEE WILLIAMS, Ed.D. Professionally and Personally Inviting Teacher Practices As Related to Affective Course Outcomes Reported by Dental Hygiene Students. (1985)

Directed by William W. Purkey, Ed.D. 202 pp.

This study investigated (1) the relationship between teacher practices and student affective outcomes (i.e., level of satisfaction) within the context of Invitational Teaching, which is a perceptually based self-concept approach to the teaching-learning process; (2) the relationship between professionally inviting teacher practices, which encourage students to learn and appreciate course content, and personally inviting teacher practices, which encourage students to feel good about themselves and their abilities in general; and (3) the differences in professionally and personally inviting practices in their relationships to student affective outcomes.

Data were collected by surveying 1045 students of 74 dental hygiene teachers in 22 schools in the southeastern United States. The Invitational Teaching Survey (ITS) (Amos, Purkey, & Tobias, 1984) identified and measured professionally and personally inviting teacher practices. Subscores under professionally inviting practices include *coordination*, *proficiency*, and *expectation* and under personally inviting practices include *consideration* and *commitment*. The Student Affective Outcome Measures (SAOM) instrument was developed and validated to assess students' level of satisfaction with the *course*, the *subject matter*, the *instructor*, and the *self-as-learner*.

Results indicated positive relationships between (1) inviting teacher practices (total ITS score) and student affective outcome measures (total SAOM score) ($r = .72$), (2) professionally inviting ($r = .67$) and personally inviting ($r = .69$) subscores and SAOM total score, and (3) professionally and personally inviting subscores ($r = .78$). When ITS subscores were used as predictors of SAOM subscores, a pattern of relationships emerged: (1) ITS

subscore-*coordination*--best predicted *course* and *subject matter* outcomes; (2) ITS subscore-*consideration*--best predicted *instructor* outcomes; and (3) ITS subscores--*coordination* and *consideration*--best predicted *self-as-learner* outcomes. The best predictors of total SAOM score were ITS subscores--*consideration* and *coordination*, accounting for 52% of the variance. Teachers who were rated higher on both professionally and personally inviting practices tended to maximize student affective outcomes.

ACKNOWLEDGEMENTS

I want to give special thanks to my husband, Jerry, and my son, Dean, for their patience with me during this research. Jerry encouraged me to strive for excellence in the writing and typing of the dissertation. He persevered in teaching me how to use word processing and a laser printer with proportional spacing to insure that the final copy looked outstanding.

Dr. Purkey, my dissertation chairman, called me weekly to be sure that I was working on the project. His cheerfulness and enthusiasm for this research gave me incentive and self-discipline to work steadily. He invited me to call him day or night if I had questions, and he gave willingly of his time and talents. Dr. Tittle provided guidance in the statistical analyses, the development of the instruments, and in the writing of Chapter III and IV particularly. Dr. Purkey and Nancy Tobias also provided help and guidance in the development of the ITS.

Jim Penny, a SAS programmer in the academic computer center at the University of North Carolina at Greensboro, always was available to help me with the SAS programming day, night, and week-ends. Rhoda Metzger, Marlin Pratto, and other staff at the computer center were always eager to assist me. Dr. Sallie McNulty, Ann Calhoun, Louise McNutt, Dan Shade, Judy Lipinski, Dr. Dave Ludwig, and Robin Panneton guided me in the statistical analyses. Judy Lipinski edited the presentation of the results in Chapter IV. I appreciate their commitment to students.

I want to thank Dr. Hargett and Dr. Van Hoose for their careful editing of the final copy. Also, I want to thank Dr. Hagaman for his helpfulness. Although Dr. Clark is deceased, I want to thank him for giving me the direction that I needed to focus on a dissertation topic and for believing in my abili-

ties. I appreciate Dr. Van Hoose' assuming the chairmanship of my committee upon Dr. Clark's death.

I also want to thank the students and faculty who participated in the initial development of the ITS and the dental hygiene directors and their students and faculty who made this study possible by their participation. I appreciate Cheryl Westphal, who was president of the American Dental Hygienists' Association, for writing a letter of endorsement to the directors of the dental hygiene programs.

Last I want to thank Charlene Smith, who duplicated this research, for her warmness and support. Her enthusiasm for this research gave me added strength to keep moving forward. She and Dr. Purkey by their words and actions constantly reminded me of the thesis of invitational education.

**"Human potential though not always apparent
is there waiting to be discovered and invited forth."**

TABLE OF CONTENTS

	Page
APPROVAL PAGE	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	viii
LIST OF FIGURES	x
CHAPTER	1
I. INTRODUCTION	1
Statement of the Problem	2
Definition of terms	5
Assumptions	6
Scope of Study	6
Significance of Study	7
II. REVIEW OF LITERATURE	13
Teacher Evaluation	13
Affective Outcomes	17
Validity of Student Ratings	19
Characteristic Behaviors of Good Teachers	23
Invitational Education	23
III. METHODS AND PROCEDURES	39
Invitational Teaching Survey (ITS)	39
Student Affective Outcome Measures (SAOM)	52
Collection of Data	61
Data Analysis	63
IV. RESULTS	66
Description of Demographic Data	66
Reliability, Correlations, and Norms	73
Correlations between ITS and SAOM	77
ITS Predictors of SAOM	81
Percentage of Teachers with High and Low ITS Scores	86
Differences between SAOM Scores	88
Correlation between Professionally and Personally Inviting Practices	91

V. CONCLUSIONS	94
Summary	94
Conclusions	98
Implications	103
Recommendations for Further Study	106
BIBLIOGRAPHY	110
APPENDIX A. Final 43 item ITS instrument	120
APPENDIX B. ITS with 140 items for judges and instructions	123
APPENDIX C. 65 item ITS used for factor analysis and reliability studies, demographic data questions, instructions to teachers, students, and proctor	134
APPENDIX D. Factor Analysis Table	142
APPENDIX E. ITS Subscores and Clusters	145
APPENDIX F. Normative data on ITS (Initial)	148
APPENDIX G. SAOM with final 20 items	154
APPENDIX H. 26-item SAOM for judges	156
APPENDIX I. 26-item SAOM of Categories for judges	160
APPENDIX J. Subcategories of 20-item SAOM.	163
APPENDIX K. ITS, SAOM, instructions, student demographic questions	165
APPENDIX L. Letter to directors and enclosures	172
APPENDIX M. Demographic questions for teachers	176
APPENDIX N. Memo to directors and Christmas greeting	178
APPENDIX O. Frequency Distribution of Student/ Teacher Ratio	181
APPENDIX P. Correlation Matrix of Invitational Teaching Survey (ITS) and Student Affective Outcome Measures (SAOM)	183
APPENDIX Q. ITS and SAOM Item to Total Correlations From High to Low	185

APPENDIX R. Normative Data for ITS (74 dental hygiene instructors)	188
APPENDIX S. Normative Data for SAOM (74 dental hygiene instructors)	195
APPENDIX T. Scoring Instructions for ITS and SAOM	198

LIST OF TABLES

Table	Page
1. Summary of Studies of General Characteristic Teacher Behaviors	24
2. Summary of Studies of Characteristic Teacher Behaviors which are Personally inviting	26
3. Description of Sample of Judges	42
4. Description of Sample used for Field Test of 65-item ITS	45
5. Rotated Factor Matrix: Personally Inviting Practices	47
6. Rotated Factor Matrix: Professionally Inviting Practices	48
7. Test Reliability of ITS Subscores	53
8. Correlation Matrix of ITS Subscores	53
9. Student Affective Outcome Item Numbers in Affective Domain Categories	55
10. Percentage of Agreement among Judges for Items Retained as Affective Outcomes	56
11. Percentage of Agreement among Judges for Categorizing Items Retained as Affective Outcomes	57
12. Percentage of Responses of Judges on Affective Outcomes	58
13. Percentage of Response of Judges in Categorizing Affective Outcomes	59
14. Correlation Matrix of Invitational Teaching Survey (ITS) Subscores.	74
15. Test Reliability of Invitational Teaching Survey (ITS) Subscores and Student Affective Outcome Measures (SAOM)	76
16. Correlation Matrix of Subscores of Student Affective Outcome Measures (SAOM)	77
17. Correlations of Invitational Teaching Survey (ITS) and Student Affective Outcome	82

18.	Canonical Correlation Analysis for Invitational Teaching Survey (ITS) Subscores and Student Affective Outcomes (SAOM) Subscores	83
19.	Summary of Forward Stepwise Regression Results Invitational Teaching Survey (ITS) as Predictors of Student Affective Outcome Measures (SAOM) (Total and Subscores)	85
20.	Forward Stepwise Regression Results Student Affective Outcome Measures (SAOM) as Criterion Variable and Invitational Teaching Survey (ITS) Subscores as Independent Variables.	87
21.	Personally (PE) and Professionally (PRO) Inviting Scores of Invitational Teaching Survey (ITS) for Top Quartile, Median, Bottom Quartile, Top Third, and Bottom Third.	88
22.	Descriptive Statistics for Invitational Teaching Survey (ITS), Professionally Inviting Score (PRO), and Personally Inviting Score (PE)	89
23.	Analysis of Variance and Duncan's Procedure	90
24.	Comparison among Relationships of Affective Outcomes: Present Study and Doyle and Whitely (1974)	101

LIST OF FIGURES

Figure	Page
1. Instrument Breakdown Tree (Invitational Teaching Survey)	51
2. Instrument Breakdown Tree (Invitational Teaching Survey and Student Affective Outcome Measures)	61
3. Teachers by State	67
4. Teachers by Type of School	68
5. Teachers by Educational Background	68
6. Teachers by Years of Teaching Experience	69
7. Teachers by Years of Clinical Practice	69
8. Student Sample by Sex	70
9. Student Sample by Age	71
10. Student by Ethnic Background	71
11. Student Sample by Year in College.	72
12. Student Sample by Prior College Experience	72
13. Student Sample by Dental Assisting Background.	73

CHAPTER I

INTRODUCTION

A major goal of education is to develop the potential of each student and to produce a productive and happy member of society. However, this goal has not always been achieved. During the 1960s and 1970s, for example, students and others complained that educational institutions were inflexible, inhumane, and filled with meaningless practices (Stanford & Roark, 1974).

In response to criticism of schools at all levels, educators attempted to create more humane educational environments by providing flexible scheduling, multimedia presentations, individualized education, discovery-oriented projects, nongraded classes, and team teaching (Stanford & Roark, 1974). In their efforts to create a more caring and humane educative process, many educators concentrated on changing the content and structure of what was taught. Unfortunately, education as a social process was sometimes overlooked during this period.

Education as a social process, which is learning what happens when humans interact effectively, is an essential element in humanistic education (Stanford & Roark, 1974). The analysis of interaction patterns proves to have implications for improving instruction (Gage, 1978; McNeil & Popham, 1973). The quality and quantity of intellectual, psychological, social, and physical messages sent and received in any school environment are vital to the teaching-learning process. What is conveyed to students about who they are, what value they have, and how responsible they are is critical. What a teacher does, both in and out of the classroom, relates to student outcomes.

"The quality and quantity of these messages can have a strong effect on the types of success which emerge in our schools" (Novak, 1979, p. 6). Although these signal systems appear to be crucial to the success or failure of students, they have not always been kept in mind as educational changes were introduced. The messages that dental hygiene teachers send to students can have a strong influence on students' perceptions of the teaching-learning environment. These perceptions in turn may lead to positive or negative educational outcomes. These relationships need to be studied to identify those factors which contribute most significantly to teacher effectiveness.

Statement of the Problem

The present study investigated the relationships between "inviting" teacher practices--an approach to the teaching-learning process called "invitational education" (Purkey, 1978; Purkey & Novak, 1984)--and student affective outcome measures. The Student Affective Outcome Measures (SAOM) was developed and validated to assess affective outcomes. Specifically, this study examined the relationship between professionally and personally inviting practices of dental hygiene teachers and affective outcomes as reported by dental hygiene students.

The overall purpose of the study was to answer the following questions related to the dental hygiene student-teacher relationship:

1. Is there a positive relationship between inviting teacher practices and student affective outcomes?
2. Is there a positive relationship between professionally inviting and personally inviting teacher practices and student affective outcomes?
3. Are there differences, if any, between professionally inviting and personally inviting teacher practices in their relationships to student affective outcomes?

4. Is there a positive relationship between professionally inviting and personally inviting teacher practices?

Research in Invitational Education

The concept of invitational education (Purkey, 1978; Purkey & Novak, 1984) is recent and therefore has received relatively little attention from researchers. Only five studies have related teacher behaviors in the context of invitational education to teacher effectiveness. Inglis (1976) developed an instrument, IN-Scale, to measure student perceptions of inviting/disinviting teacher behavior and classroom effectiveness. She studied teacher invitations and teacher effectiveness in a postsecondary setting of general and technical education. In a second study, Lambeth (1980) used the IN-Scale in a secondary setting of general and technical education. A third study by Turner (1983) also used the IN-Scale to study physical education teachers in the secondary setting. In the most recent completed study, Ripley (1985) adapted and used the Invitational Teaching Survey (ITS) developed by Amos, Purkey, Tobias (1984) and the Student Affective Outcome Measures (SAOM) developed in this study. She altered the wording of some ITS items and some SAOM items to make the content appropriate for inviting teaching practices and for student affective outcome measures in a clinical nursing setting as opposed to a classroom setting. She studied associate degree nursing students and their instructors. Smith (1985) replicated the present study with a sample of graduate nursing students who assessed inviting practices of their instructors and reported their satisfaction with affective outcomes. Results of all five studies indicated that inviting teachers tend to be effective teachers with effectiveness being measured by various outcomes.

The first three studies (Inglis, 1976; Lambeth, 1980; & Turner, 1983) concentrated on both process variables (inviting and effective teacher behaviors) and product variables (grades, student statements as to how hard they worked and how much they learned). The study reported here, Ripley (1985), and Smith (1985) expanded beyond those studies by using the Invitational Teaching Survey (ITS) to obtain student ratings of professionally and personally inviting teacher practices. The inviting teacher practices were then related to student affective outcome measures. Also, the general application of concepts of invitational teaching was examined in the context of professional programs for dental hygiene, associate degree nursing, and graduate nursing students.

The earlier Inglis (1976) IN-Scale was deemed to be unsuitable for the present study because two major problems existed: (1) content and wording of items and (2) the dimensions of items. The IN-Scale items are not consistent in the way they are worded: some describe what the teacher does and some describe how the student feels. The items did not include some areas that were thought to be important in invitational teaching. Further it was hypothesized that teacher practices are divided into two dimensions--personally inviting and professionally inviting practices. Although Inglis' items were divided into inviting and effective behaviors, they did not fully represent these two dimensions. However, since the basic content of some of her items was appropriate for the study of the development of the ITS, many were included in the initial pool of items for the ITS that were judged as being professionally or personally inviting.

Other problems existed with the size of samples in the Inglis (1976), Lambeth (1980), and Turner (1983) studies. In Inglis' study (1976) the reliability of the original 68 items was determined on a sample of 113 stu-

dents. The factor analysis was conducted on data from 159 students. The normative data and the reliability of the 50-item IN-Scale was determined on a sample of 55 students. In the Lambeth study (1980), the sample consisted of 36 teachers and 270 students. In the Turner study (1983), the sample consisted of 14 teachers and 206 students. Therefore, there was a need for further study which included a larger sample of teachers and which involved the development of an instrument that was designed to measure professionally and personally inviting teacher practices.

Definitions of Terms

Invitational Education--a perceptually based self-concept approach to the teaching-learning process anchored on four propositions: (1) that people are able, valuable, and responsible and should be treated accordingly; (2) that education should be a cooperative activity; (3) that people possess untapped potential in all areas of human development; and (4) that potential can best be realized by places, policies, and programs which are specifically designed to invite development, and by people who are intentionally inviting with themselves and others, personally and professionally.

ITS (Invitational Teaching Survey)--43 items using Likert-type scales to measure professionally and personally inviting teacher practices. The ITS consists of five subscores, two of which (*commitment* and *consideration*) are judged as personally inviting; the other three subscores (*coordination*, *proficiency*, and *expectation*) are judged as professionally inviting.

Professionally Inviting Teacher Practices--teacher behaviors identified by the ITS such as *coordination*, *proficiency*, and *expectation* that summon students cordially to learn and appreciate course content.

Personally Inviting Teacher Practices--teacher behaviors identified by the ITS such as *commitment* and *consideration* that summon students cordially to feel good about themselves and their abilities in general.

Intentionality--teachers are aware of their specific practices and therefore behave consistently in an inviting manner.

SAOM (Student Affective Outcome Measures)--20 items using Likert-type scales to measure professed student affective outcomes. The SAOM consist of four subscores--*course*, *instructor*, *subject matter*, and *self-as-learner*.

Student Affective Outcomes--statements of student's professed level of satisfaction with the *course*, the *instructor*, the *subject matter*, and the student *self-as-learner*, as measured by the SAOM. These statements represent students' professed perceptions about course outcomes.

Assumptions

The following assumptions were made:

1. Students will accurately report their perceptions of teachers' behaviors on the ITS and their feelings on the SAOM, and therefore, this information is a valid source of data for study.
2. The Invitational Teaching Survey (ITS) (Amos, Purkey, & Tobias, 1984) accurately measures student perceptions of professionally and personally inviting practices of dental hygiene teachers.
3. The Student Affective Outcome Measures (SAOM) accurately measures affective outcomes for dental hygiene students.

Scope of Study

This study included 22 dental hygiene programs in Georgia, North Carolina, South Carolina, Virginia, and West Virginia. The sample included 74 dental hygiene teachers and 1045 dental hygiene students. Students returned 1045

usable answer sheets. Responses to the ITS, SAOM, and demographic data questions were included on student answer sheets. Teachers also completed a separate answer sheet for demographic data. Statistical analyses were performed using SAS programming (Ray, 1982a; 1982b) for Pearson product-moment correlation, multiple regression, canonical correlation, *t* test, *anova*, and Spearman-Brown prophecy formula. SPSSX programming (SPSSX Inc., 1983) was used for Cronbach's alpha in determining internal consistency for reliability of the ITS and SAOM.

The limitations of the study include the following: (1) Students present on the day that the materials were administered were the only subjects included, and no effort was made to contact students who were absent. (2) This study was restricted to professionally and personally inviting teacher practices as measured by the ITS and to student affective outcomes as measured by the SAOM. (3) Student perceptions of their dental hygiene teachers' professionally and personally inviting practices and students' perceptions of affective outcomes might have been biased. (4) The design of the study did not allow examination of cause-and-effect relationships. (5) Each student rated the teacher on both the ITS and SAOM; therefore, the ITS and SAOM are likely to be correlated. (6) The ITS subscore on *expectation* was one item; the SAOM subscores on *course* and *subject matter* included only three items each as compared to seven items each for subscores on *instructor* and *self-as-learner*. If more items were added to the subscores with low number of items, the results might change.

Significance of Study

This study is significant for four reasons: (1) Continuous study of successful teaching is needed to improve the teaching-learning process.

(2) Evidence of the value of professionally and personally inviting practices is provided by studying their relationship to student affective outcomes. (3) The unique nature of dental hygiene education offers an unusual opportunity to study the importance of teacher performance as it relates to student affective outcomes. (4) The results provide information that may improve the overall quality of instruction in dental hygiene education. Each of these reasons will be presented in turn.

Improvement of the Teaching-Learning Environment

Continuous study of successful teaching is needed to improve the teaching-learning process. The typical political and administrative response to educational problems has been to change facilities, curriculum content, and program requirements. This approach overlooks the critical need to constantly evaluate the student-teacher relationship and to study the influences on teacher performance and effectiveness.

Glasser (1969) suggested that students are pleased and happy when education becomes a cooperative endeavor between students and teachers. He stated that teachers need to reveal themselves as human beings to students if education is to prepare students for successful living. Students need teachers who are caring, warm, and encouraging, and who expect commitment to educational endeavors.

Further evidence of the importance of the teacher in the teaching-learning process is given by the following quotes. Henry Adams (cited in Campbell, 1972, p. 132) said that "a teacher affects eternity; he can never tell where his influence stops." Hansen (1981, p. 223) said that "the best single investment in education remains with teachers and how they behave." Campbell (1972, p. 157) also stressed the importance of the teacher's development--"when

teachers stop becoming better, they stop being good." Student assessment can provide information useful to teacher development.

A panel of prominent educators who met with Secretary of Education William J. Bennett documented the significance of teaching by recommending that the federal government direct its research efforts towards improving teaching ("Research Should," 1985). Another example of the increased concern for improving teacher effectiveness is noted by the following resolution passed at the Fifty-first Annual Session of the American Association of Dental Schools:

Resolved, that the American Association of Dental Schools, which feels that the evaluation of faculty performance is an important ingredient in improving the quality of dental education, recommends that each school of dentistry, dental hygiene, dental assisting, and dental laboratory technology establish a committee on teaching effectiveness. ("Proceedings of," 1974, p. 317)

Chambers (1977) presented a thorough review of literature pertinent to faculty evaluation in dental education. He supported systematic evaluation to improve the quality of dental education. Dental hygiene educators (Rasmussen & Uchello, 1978; Skaff, 1975; Tarkowski, 1984) also support faculty evaluation to improve teacher performance and teacher effectiveness in dental hygiene education. The present study is designed to provide information which may help teachers better their performance. This, in turn, may lead dental hygiene students to feel positive about their educational experiences.

Inviting Practices related to Affective Outcomes

The validity of models supporting the importance of professionally and personally inviting practices may be determined by studying their relationship to student affective outcomes. This study measured the value of professionally and personally inviting teacher practices by examining how these practices related to student affective outcomes. By studying the relationship between

teacher practices and student affective outcomes, this study attempted to answer two questions posited by Novak (1984) in his "Go-Pep" Inviting Educative Events Research Model: "What factors correlate with invitational teaching? What results from invitational teaching?" (p. 13). In Chapter II, the Invitational Teaching Model and related research are presented in greater detail.

Nature of Dental Hygiene Education

The nature of dental hygiene education offered an opportunity to study the importance of teacher performance and teacher effectiveness in a unique educational setting. Students enrolled in a dental hygiene program are different from many students in high school and other college classes in that dental hygiene students have made a career choice and are more certain of the educational opportunities they desire. There is considerable pressure on students because of the intensity of the curriculum and the requirements for entrance into the profession upon graduation--National Board Examination and state board examination. To clarify this intensity, the exams will be explained. The National Board Exam is an eight-hour test covering didactic content of the dental hygiene curriculum. State board exams emphasize the practical application of clinical skills in providing dental hygiene care to patients. A smaller didactic section is included on radiographic technique, oral pathology, and ethics and jurisprudence.

The unique nature of the role of a dental hygienist accentuates the importance of students having an opportunity to model personally inviting practices as demonstrated by their teachers. Interpersonal communication skills are important in dealing with dental patients and with community groups. Attitudes toward the working environment are critical to successful employment in dental hygiene just as favorable attitudes toward the teachers, courses,

subject matter, and self as a learner are critical to successful completion of dental hygiene education.

However, the importance of teacher performance and teacher effectiveness extends to every educational setting. It makes no difference if the teacher is a high school English teacher, a graduate school business teacher, a community college engineering teacher, or a two-or four-year college dental hygiene teacher; what he or she does in the classroom is a critical issue in the teaching-learning environment. Dental hygiene teachers behave like other teachers to the degree that they are professionally and personally inviting with students. The dimensions of professionally and personally inviting teacher practices identified in the Invitational Teaching Survey (ITS) (Amos, Purkey, & Tobias, 1984)--*commitment, consideration, coordination, proficiency, and expectation*--clearly apply in the educational environment of dental hygiene teachers. In addition, the dimensions of student affective outcomes identified by the Student Affective Outcome Measures (SAOM)--*course, instructor, subject matter, and self-as-learner*--also apply to dental hygiene students.

Contributions to Dental Hygiene Profession

Finally, this research may contribute toward improving the overall quality of instruction in dental hygiene education by providing information that may be useful in several ways. First the information could be used for faculty development of dental hygiene teachers and of teachers in other settings by helping them to develop intentionality in their professionally and personally inviting practices. Teachers would then behave consistently in an inviting manner. Secondly, the data on the relationship of inviting practices and student affective outcomes may help teachers understand the effects of their practices on students. Thirdly, the investigation may help dental hygiene teachers to

analyze their practices, which should increase the likelihood of their being more professionally and personally inviting.

Clarifying the complexities of teacher performance and various student outcome variables is essential. Unlocking these complexities will help to improve the quality of personal and professional decisions related to the quality of instruction (Medley, 1982). Because the teacher is the link between the educational program and the student, a primary goal of education is to improve teacher performance and effectiveness. Countless studies have attempted to investigate the quality of instruction by studying teacher personality, methodology, student growth, and classroom interaction including verbal communication, leadership practices, and emotional and social atmosphere (Saadeh, 1970). Educators will have a better chance of improving student outcomes if the relationship between teacher behavior and student outcomes is made clearer.

Summary

Chapter I presented an introduction to the present study which included the statement of the problem: namely, to study the relationships between inviting teacher practices and student affective outcomes and to examine differences, if any, between professionally and personally inviting practices of teachers and differences in their relationships to student affective outcomes. Also included in this opening chapter were definitions of terms, assumptions, the scope of the study, and the significance of the study. The student-teacher relationship is a major ingredient in quality education. The significance of this study is its potential for improving the teaching of dental hygiene educators and educators in other fields. Chapter II will provide a review of the literature on teacher evaluation, affective outcomes, validity of student ratings, characteristic behaviors of good teachers, and invitational education.

CHAPTER II

REVIEW OF LITERATURE

Five areas of research in teacher performance and effectiveness are relevant to this study. The first area is teacher evaluation. The second area is the importance of affective outcomes in educational experiences. The third area of research consists of studies which attempted to validate student ratings of teacher performance. In this section, studies measuring the relationship between student ratings of teacher performance and affective and cognitive student outcomes will be considered. The fourth area of research analyzes studies which determined characteristic behaviors of good teachers. The last area of research examines invitational education and includes a description of the Invitational Teaching Model and four studies (Inglis, 1976; Lambeth, 1980; Ripley, 1985; Smith, 1985; & Turner, 1983) on the model. Although references in the literature specifically related to dental hygiene teachers and students were sparse, the findings are applicable to dental hygiene education. Each of the five areas just outlined will now be examined.

Teacher Evaluation

Before teachers make changes, the total teaching-learning environment should be carefully evaluated. Educators tend to agree that teacher evaluation is one area that is important (Chambers, 1977; McGreal, 1983; Rasmussen & Uchello, 1978; Tarkowski, 1984). According to Bolton (1973), educators concur that the overall goal of evaluation is to safeguard and improve the quality of instruction received by students. It appears that no one can evaluate all possible variables contributing to the teaching-learning environment. The

problem, therefore, is to determine (a) what to evaluate, (b) how to evaluate, and (c) who is to evaluate. Each variable will now be considered.

What and How to Evaluate

When considering what to evaluate, there are many options. One could choose from a number of variables, including schedules, the curriculum program, textbooks, testing methods, physical environment, and the quality of instruction. Although all variables are important, this present study concentrated on the quality of instruction which includes teacher performance and teacher effectiveness.

Teacher performance refers to the behavior of a teacher (both inside and outside the classroom). Teacher effectiveness refers to the results a teacher obtains or to the progress students make towards some goal (Medley, 1982). The distinction is made here between what the teacher does and what the students accomplish. Both relate to the interactions between teacher and students. Many consider teacher performance to be the basis for teacher effectiveness.

There is considerable agreement about how to evaluate teacher performance and teacher effectiveness. Teacher performance can be evaluated by direct observation of practices. Teacher effectiveness can be evaluated by careful study of results, student self-reports, and testing of "learning outcomes."

However, it is more difficult to determine what learning outcomes are to be expected in the instructional environment. According to Bloom (1972) and Krathwohl, Bloom, and Masia (1964), teacher effectiveness can be measured by learning outcomes in three domains: cognitive, affective, and psychomotor. The cognitive domain emphasizes intellectual outcomes (e.g., knowledge and thinking skills). The affective domain emphasizes feeling, values, and emotion (e.g.,

interests, attitudes, appreciations, satisfactions). The psychomotor domain emphasizes motor skills (e.g., typing, swimming, using dental instruments).

Cognitive outcomes, as measured by achievement tests, have been a major focus of teacher effectiveness research in elementary and secondary schools, though less so in postsecondary colleges and universities. Student affective outcomes have received even less attention in studies of teacher effectiveness at all levels of education. Since psychomotor outcomes are a primary concern only in a few areas of the curriculum such as physical education and typing, this domain has received less attention than the cognitive domain. The dental hygiene profession, however, strongly emphasizes the psychomotor domain since many hours are spent in clinical practice.

Who Evaluates

When considering who should evaluate, there are a number of alternatives. A teacher's performance and effectiveness could be measured by the teacher himself or herself, other teachers, administrators, students, the public, parents, or professional evaluators. Numerous researchers (Aleamoni, 1978, 1979, 1981; Centra, 1979; Costin, Greenough, & Menges, 1971; Derry, 1979; Doyle, 1972, 1975, 1983; Macklup, 1979; Marsh, 1984; Marsh, Fleiner, & Thomas, 1975; Marsh & Overall, 1979; McKeachie, Lin, & Mann, 1971; Raths, 1982; Sihota & Singhania, 1981) support evaluation of teachers by students. Since students are influenced directly or indirectly by the quality of instruction, it seems logical that they are in a position to qualify as evaluators (Aleamoni & Spencer, 1973). Students' feelings and attitudes about what takes place are important cues for solving problems. Campbell (1972) underscored the significance of attending to students' opinions: "If scientists paid no more attention to plants than many of them do to students, we would likely live in a jungle of weeds" (p. 1). He

strongly advocates that educators get in touch with what is going on in students' minds. Educators and administrators should listen to student opinions.

However, there are critics who question the value of student ratings. According to Scheck (1978), a problem with student ratings is that teacher behaviors are rarely related to college students' learning outcomes as a typical and regular procedure for evaluation. The value of student ratings of teachers is questionable if teacher behaviors do not relate to student outcomes. Hansen (1976) reported that the only justification for student ratings is for personal feedback for the teacher to improve teaching and for a guide for students to select a course.

Four difficulties in using student evaluations are discussed by Dunkin and Biddle (1974). The first difficulty is that judgments made by students are inferences. The second difficulty is that the judgments are made over a semester or a year and may not represent how teachers vary in behaviors. The third difficulty is that students are not trained observers. The final difficulty is the lack of adequate validation of ratings against outcome variables such as learning and attitudes. Research about the validity of student ratings is discussed later in this chapter. Scheck (p.12, 1978) sums up the feelings of opponents of student evaluations by saying that teachers are looking for better ways to evaluate their effectiveness than "the oppressive use and abuse of student evaluations."

Teacher evaluation presents problems in determining what should be evaluated, how, and who should evaluate. Although evaluation is an important prerequisite to changing the teaching-learning environment, it can be an unpleasant experience for teachers and students. Teachers often resist evaluation because they feel that the classroom is their domain, and that evaluation represents an

invasion of their privacy (Centra, 1979). Tarkowski (1984) reported that dental hygiene administrators realize that performance evaluations could have an "overall negative impact on some faculty" (p. 14). Evaluations sometimes are used to frighten teachers rather than to help them improve.

Yet, "teaching is too important to too many to be conducted without a critical inquiry into its worth" (Millman, 1981, p. 12). Getting teachers involved in the evaluation process may reduce their anxiety and fears. Assuring anonymity for students eases their worry about being identified by the teacher. Evaluation should be a continuous process in every educational setting since the far-reaching influence of teachers on students is self-evident.

Affective Outcomes

Student affective outcomes are a major focus of the present study. "Affect" has been explained (Fishbein, 1966) as a person's feelings of liking or disliking and assessment of some person, event, or object. Relevant educational affects are feelings about school, about learning, about subject matter, and about the self as a learner (Bloom, 1976, p. 139). Knowing what maximizes students' liking for particular educational experiences could be invaluable to the teacher in creating a healthy classroom environment conducive to learning (Johnson, 1974; Mager, 1968; Vargas, 1977).

The affective, cognitive, and psychomotor domains cannot be totally separated. Affective behavior has a cognitive part and cognitive behavior contains affect. The psychomotor domain typically involves applications of what is mastered in the cognitive and affective dimensions. All three domains are interdependent. According to Johnson (1974), affective outcomes are included in all learning. No matter what knowledge or skill students master, they will have opinions and feelings about what happened and what they learned

as a result of instruction. Students develop feelings about the subject matter, the instructor, the course, self-as-learner, and education in general. Developing positive affective reaction may be as important as learning specific knowledge or skills (Johnson 1974, p. 99). Students' affective reactions to school strongly influence future behavior. Therefore, working to develop positive affective outcomes relating to every aspect of the school environment is important.

There are two reasons why affective outcomes are appropriate criteria for evaluating effective teaching. The first reason is their central importance to the learning process. Goral and Clark (1980) emphasized the need for dental hygiene education to direct attention toward the affective domain. They feel that affective education promotes lifelong learning. In dental education, MacKenzie (1981) reported that a negative atmosphere hinders learning by setting a tone in which students will not ask questions and will avoid teachers, resulting in poor attitudes toward their dental education which may carry over into dental practice. The significance of affective outcomes is summarized clearly by Guba and Getzels (1955, p. 335).

Whatever the teacher may teach, it is obvious that the teaching is carried on in the context of an interpersonal setting . . . the teacher cannot force the pupil to learn; what she can do is to produce a situation which the pupil will find conducive to learning. To relieve the teaching process of its affective elements is to reduce it to a sterile, highly intellectualized procedure which the pupil is unlikely to find encouraging.

Since little is known about how to increase affective outcomes, it is an important area to study.

The second reason is the importance of affective outcomes in improving society. The technological and cultural changes and the emphasis on self-actualization and interpersonal skills has placed more importance on affective

outcomes. The development of positive attitudes toward school can improve students' enjoyment of school and in the long run improve students' attitudes toward their responsibilities in society. Students should value and support the instructional process (Johnson, 1974). By focusing on affective outcomes, it might be possible to learn why students are alienated from school and learning (Andersen, 1978). Research on the validity of affective outcomes as a measure of teaching effectiveness is discussed in the next section.

Validity of Student Ratings

This section of the review of literature describes research which attempted to validate student ratings as measures of teaching effectiveness. Since there does not seem to be an all-inclusive criterion of teacher effectiveness, student ratings are difficult to validate. However, most researchers have used a construct validation approach (Marsh & Overall, 1980). Research using cognitive and affective outcomes as criteria for effective teaching will now be considered.

Construct Validity

In a construct validation approach, student ratings are correlated with many variables. For example, ratings have been validated by criteria such as self-evaluations by the teachers being evaluated (Braskamp, Caulley, & Costin, 1979; Doyle & Crichton, 1978; Marsh, Overall, & Kesler, 1979), as retrospective ratings by alumni (Marsh, 1977), and as follow-up-ratings by the same students years after graduation (Marsh & Overall, 1979; Overall & Marsh, 1982).

Cognitive Outcomes. The variable used most often as the criterion for teacher effectiveness is cognitive outcome as measured by performance on a standardized final exam, although course grade is sometimes used. Most studies have reported a low-to-moderate correlation between student ratings and achieve-

ment as measured by an exam (Costin, 1978; Doyle & Whitely, 1974; Frey, 1973); Grush & Costin, 1975; Marsh, Fleiner, & Thomas, 1975; McKeachie, 1969, 1979; Sullivan & Skanes, 1974). In contrast, Rodin and Rodin (1972) found a high negative correlation between mean student ratings of effectiveness and mean performance of students on a math test. Using course grade as the criterion for measuring cognitive outcomes, researchers (Feldman, 1976; Sihota & Singhania, 1981) found a significant relationship between course grade and student ratings. Scott, Mayberry, Lefcoe, and Harrington (1985) found that the inquiry approach to dental hygiene education as measured by student evaluations of teacher inquiry-disinquiry behavior and of their own inquiry-disinquiry behavior had a positive effect on clinical productivity (i.e., oral inspections, oral prophylaxis) and on National Board Examination scores.

Affective Outcomes. The construct validation approach has also been used to study the relationship between outcomes, not only as measured by exams, but as measured by how students felt about different aspects of a course (e.g., how much they felt they had learned, how they felt about their performance, overall teacher and course effectiveness, interest in subject matter). These measures involve student perceptions of affective outcomes.

There are numerous variables that influence student perceptions of a course. The following findings illustrate these variables:

1. A significant relationship existed between a global rating of overall teacher effectiveness and achievement (Centra, 1977, 1979; Doyle & Whitely, 1974; Overall & Marsh, 1978).

2. Students who saw themselves as "superior" or "above average" in the class in their academic performance tended to rate their teachers and courses more favorably (Haslett, 1976; Mintzes, 1979b).

3. Overall grade point average appeared to have little or no relationship to teachers or course evaluations but interest in the subject was positively related to student evaluations as were student perceptions of how much they learned in class and how well they performed (Feldman, 1976).

4. Overall ratings of the course value were highly correlated to the mean exam performance (Centra, 1977).

5. Changes in student interest and expected grade in courses were the most important determinants in changing students' ratings of the instructors and the courses (Hocking, 1976).

6. How students perceived the overall teaching performance was strongly backed up with their feelings about the course (Read, 1979).

7. The type of course taught and the level of the course (undergraduate-graduate) was less important in determining outcomes of student ratings than a specific instructor (Marsh & Overall, 1981).

Andersen (1978), McVetta (1981), and Scott and Wheelless (1977) emphasized student affective outcomes as important criteria for teacher effectiveness. These studies strongly support this study. Andersen (1978) found that nonverbal teacher immediacy behaviors and solidarity (similar to immediacy) were significantly related to overall teaching effectiveness as measured by student affective learning and student cognitive learning.

McVetta (1981) reported that nine instructional variables (i.e., content, method, readings, interaction, sociability, composure, character, extroversion, and competence) accounted for 43% of the variance in student overall affect toward the course. Method accounted for the most variance, and interaction accounted for the least variance in overall student affect. The dimensions of

credibility (i.e., sociability, composure, character, extroversion, and competence) accounted for 34% of the variance in overall student affect.

Scott and Wheelless (1977) reported that attitudes and satisfaction with discussion and oral assignments seemed low when any type of apprehension--oral, writing, receiver (degree one is fearful about misinterpreting or being able to psychologically manage new information)--was high. Students high in oral or receiver apprehension also were less satisfied with oral assignments. Students high in receiver apprehension were less satisfied with lectures and students high in writing apprehension responded with less satisfaction with writing in and out of class.

Although there are few studies using affective outcomes as criteria for teaching effectiveness, compared to the number of studies using cognitive outcomes as criteria, many researchers support the use of affective outcomes (Andersen, 1978; Anderson, 1981; Borich & Madden, 1977; Byrne, 1961; Centra, 1979; Combs, 1982; Cooper, Stewart, & Gudykunst, 1982; Doyle, 1972; Doyle & Whitely, 1974; Good, Biddle, & Brophy, 1975; Grush & Costin, 1975; Haslett, 1976; Holland & Vann, 1983; Marsh & Overall, 1980; McKeachie, 1969, 1979; McVetta, 1981; Mintzes, 1979b; Overall & Marsh, 1982; Perkins & Abbot, 1982; Purkey, 1970, 1978; Purkey, Cage, Graves, 1973; Purkey & Novak, 1984; Scott & Wheelless, 1977; Trentham & Halpin, 1979; Weber & Hunt, 1977).

Previous research provides guidelines for conducting research studies on teacher performance and effectiveness. Although many variables influence student ratings, the validity of cognitive and affective learning outcomes as measures of teacher effectiveness has been supported by research. In addition, a high degree of reliability of student ratings, usually ranging from 0.8 to 0.9 and above (Darling-Hammond, Wise, & Pease, 1983) has been established. Student

ratings are an inexpensive way to evaluate the quality of instruction. Research has shown that student evaluations can play an important role in improving teacher performance and effectiveness. The concept of student ratings is not new, since they have been used for over 50 years to evaluate the quality of instruction (Berk, 1979).

Characteristic Behaviors of Good Teachers

This section of the review of literature includes studies which identify important characteristics of good teachers. This research is important to the present study since the findings of this study identified teacher practices which best predict student affective outcomes.

The summary of research is presented in two tables. Table 1 summarizes studies directed toward general characteristic behaviors of teachers. Table 2 summarizes studies directed toward the personally inviting characteristic behaviors of good teachers.

From the synthesis of research on characteristic behaviors of good teachers in Tables 1 and 2, the importance of professionally and personally inviting practices can be observed. The emphasis on student-teacher relations is clear and important; therefore, it seems appropriate to conclude this section of the research with a quote from the poet Kahil Gibran (1929): "the teacher who walks in the shadow of the temple, among his followers, gives not of his wisdom, but rather of his faith and his lovingness" (p. 64).

Invitational Education

The last section of the review of literature describes the Invitational Teaching Model and research on the model (Inglis, 1976; Lambeth, 1980; Ripley, 1985; Smith, 1985; Turner, 1983). Since this present study determined the relationship between personally and professionally oriented teacher practices

Table 1**Summary of Studies of General Characteristic Behaviors**

<u>Study</u>	<u>General Characteristic Behaviors</u>
Hildebrand, 1973	contrasts the implications of various theories, presents facts and concepts from related fields, is an excellent speaker, explains concepts clearly, makes difficult topics easy to understand, shows interest and concern in the quality of his/her teaching, is dynamic and enthusiastic, enjoys teaching, invites criticism of his/her own ideas, knows if the class is understanding him/her or not, keeps up-to-date about the progress of the class, is valued for advice not directly related to the course, and uses wit and humor effectively
Sullivan & Skanes, 1974	combines task orientation with clarity of presentation, encourages independent thinking, expresses different points of view, conveys enthusiasm for subject, induces students to work hard
Wotruba & Wright, 1975	has communication skills, has favorable attitudes toward knowledge of subject, organizes subject matter and course well, is enthusiastic about subject, fair in exams and grading, willing to experiment and be flexible, encourages students to think for themselves, is interesting lecturer, and able to speak well.
Grush & Costin, 1975	is self-confident, personable, vigorous, is able to control without negative affect
Dixon & Koerner, 1976	has systematic theoretical orientation, demonstrates logical thinking, shares own thinking, relates theory to practice, presents material in systematic orderly manner
Tuckman, 1976	is creative, dynamic, organized, warm, and accepting
Guerney, 1977	has knowledge of subject matter, is flexible
Mintzes, 1979a	is a successful communicator, is organized, attentive to student needs, and fair in grading and evaluating

Table 1 (Continued)**Summary of Studies of General Characteristic Behaviors**

<u>Study</u>	<u>General Characteristic Behaviors</u>
MacKenzie, 1981	develops exams to encourage thinking, asks thought provoking questions, pauses after asking questions, evaluates work with consistency, praises students before criticism, promotes positive emotional tone, praises student ideas, encourages students' decision-making
Murray, 1983	has clarity, enthusiasm, rapport

Table 2

Summary of Studies of Characteristic BehaviorsWhich Are Personally Inviting

<u>Study</u>	<u>Characteristic Behaviors Which are Personally Inviting</u>
Aspy & Roebuck, 1972, 1977 OConnor, Miller, & MacKenzie, 1983 Rogers, 1961, 1969, 1980 Traux & Carkhuff, 1967	establishes and maintains good relationships with students (humaneness, realness, acceptance, empathy)
Amidon & Flanders, 1963 McLaughlin & Erickson, 1981	maintains integrative (nondirective) activity, participates, gives approval, accepts differences, is committed to improving classroom climate and student achievement
MeKeachie, Lin, Milholland, & Issacson, 1966	believes warm teachers usually have more influence with students who have a high need for affiliation than students with a low need for affiliation
Bereson, 1971 Carkhuff, 1970	has exceptional skills in human relationships
Bochner & Kelly, 1974	believes communication is central focus of student-teacher relationship; therefore tries to develop "interpersonally competent individuals"
Jenkins & Bausdell, 1975	ranks relationship with the class as most important and flexibility as second
Patalano, 1978	has friendliness, sense of humor, warmth, empathy, and enthusiasm
Dixon & Koerner, 1976	believes individualized prescriptive approach responds to students as individuals: evaluates student in variety of ways, keeps student apprised of progress, identifies strengths, guides development

Table 2 (Continued)**Summary of Studies of Characteristic Behaviors****Which Are Personally Inviting**

<u>Study</u>	<u>Characteristic Behaviors Which are Personally Inviting</u>
Wong, 1978	is willing to answer questions and to offer explanations, is interested in students and respectful to them, gives students encouragement and due praise, informs students of their progress, displays an appropriate sense of humor, has a pleasant voice, is available to students when needed, gives an appropriate amount of supervision, displays confidence in themselves and in the students
Pascarella, 1980	believes significant positive association exists between extent and quality of student-faculty informal contact and students' educational aspirations, their attitudes toward college, their academic achievement, intellectual and personal development, and their persistence from the freshman to sophomore year.
Jacobson, 1982	believes students' own relationships with teachers valued more than teacher's performance in classroom, is sensitive to students as individuals, shows interest in nonacademic areas of students' lives
Felletti & Sanson-Fisher, 1983	believes caring and facilitation more important than knowledge and information-giving role
Cooper, Stewart, & Gudykunst, 1982	values student's relationship with instructor

and student affective outcomes, it is important to report this literature.

Also, this literature provides background for the interpretation of the Invitational Teaching Survey (ITS) which was used in this study.

Invitational Teaching Model

Invitational education was first presented by Purkey (1978) and later extended by Purkey and Novak (1984), Schmidt (1982), Russell, Purkey, and Siegel (1982), Stillion and Siegel (1985), and others. Human interaction that promotes positive relationships and develops human potential is the underlying theme. Invitational theory supports the belief that "each individual has relatively untapped potential for intellectual, psychological, and physical development, and that this potential is best realized in a human and humane environment that intentionally invites the process" (Purkey & Schmidt, 1987, p. 6). Teachers who develop intentionality consistently behave in an inviting manner.

Two foundations. Invitational education is based on two foundations: perceptual tradition and self-concept theory (Purkey & Novak, 1984). Perceptual psychology looks at people according to how the world seems to them. Perceptual tradition is based on three assumptions which relate to invitational education. The first assumption is that behavior is seen as the result of "the perceptions that exist for an individual at the moment of behaving, especially the perceptions about self and world" (Combs & Avila, 1985, p. 29). Perceptions include the personal significance for the person at the moment. The personal meanings that people bring to an experience go beyond sensory experience to include beliefs, values, feelings, hopes, desires and the way people view themselves and others (Combs & Avila, 1985 p. 30). Invitational education purports a belief that perceptions are capable of changing and that human potential has space for "infinite expansion" (Purkey & Novak, 1984, p. 25).

A second assumption is that perceptions are learned. Perceptions evolve from life experiences with significant people and can change over the years. In

the perceptual tradition the third assumption is that it is important to reflect upon perceptions to increase sensitivity to one's own perceptual world and to the world of other people. Reflection leads to a better understanding of the perceptions of self and others (Purkey & Novak, 1984). For a complete discussion of perceptual psychology see Combs and Richards (1976).

The second foundation of invitational education is self-concept theory. It is an organization of ideas about oneself. "From the perceptual frame of reference, an individual's behavior is understood to be the direct consequence of the total field of personal meanings existing at that instant (the perceptual field)" (Avila & Combs, 1985, p. 31). Perceptions about self are at the center of the perceptual field. How people feel about themselves is always present in influencing behavior. Self-concept includes all references that a person makes to "I" or "me" (Avila & Combs, 1985). Purkey (1970) found that self-concept is based on how people think significant people perceive them. Maslow (1968, p. 59) found that when people live in an environment that satisfies their basic needs for safety, belongingness, love, and respect, they feel unthreatened, autonomous, interested, and spontaneous. The less anxious person is more likely to be bold and courageous about exploring the unknown. Then they can grow and develop their potential. Therefore, teachers should act in a manner that will encourage students to feel good about themselves and their abilities.

Basic assumptions. Purkey and Novak (1984) define invitational education as "a perceptually based, self-concept approach to the educative process and professional functioning that centers on four basic principles: (1) people are able, valuable, and responsible and should be treated accordingly; (2) teaching should be cooperative activity; (3) people possess relatively untapped

potential in all areas of human development; and (4) this potential can best be realized by places, policies, and programs that are specifically designed to invite development, and by people who are personally and professionally inviting to themselves and others" (p. 2).

Four basic elements provide invitational theory with structure which can provide teachers with direction so they can develop a consistent "stance" in initiating and keeping relationships (Purkey & Schmidt, 1987). The four elements are optimism, intentionality, respect, and trust.

The first basic element of invitational theory is optimism which is a "positive vision of human existence" (Purkey & Schmidt, 1987). Individuals should be treated as valuable, able, and capable of self-direction. Everything that happens in an institution is important and has an influence on the educative process, no matter how insignificant it may appear.

The second basic element of invitational theory is intentionality. Teachers can gain trust and respect if they behave consistently in an inviting manner. Human potential can best be achieved in institutions where people show intentionality in being professionally and personally inviting with themselves and others.

The third basic element of invitational theory is respect. A belief in individual uniqueness is important in respect. Behavior that reflects courtesy and politeness affirms the value of each person. A part of respect is responsibility. Invitational theory encourages self-responsibility.

The fourth basic element of invitational theory is trust. The interconnectedness of people in how they relate to themselves and to others is realized. This relationship is most likely to occur when people feel free to

express feelings and to be open. Invitational theory promotes an atmosphere that is cooperative and trustworthy.

Areas of inviting. The inviting process involves complex human experiences which occur at four basic levels (Purkey & Novak, 1984). These levels are (1) being personally inviting with oneself, (2) being personally inviting with others, (3) being professionally inviting with oneself, and (4) being professionally inviting with others.

The area of inviting oneself personally means that to continue to feel good and to have energy, teachers need to revitalize or recharge themselves with a break in the work routine. Examples are jogging, walking, biking, doing aerobics, swimming, reading a good book, and attending a concert. Doing something to maintain physical, mental, emotional, and spiritual health is emphasized.

The area of being inviting with others personally means that personal relationships are a top priority and emphasizes the social aspect of invitational teaching. The teachers let students know that they care and respect them. An effort is made to keep up with the world that the student lives in today.

The area of being inviting with oneself professionally emphasizes the importance of teachers getting involved in their own professional development. A constant effort is exerted to improve skills in teaching and to gain knowledge in a particular field by participating in workshops, reading professional journals, participating in in-service activities, and seeking feedback from students about their teaching.

The area of being inviting with others professionally builds on the first three areas. If these areas are working well, the teacher is set to be

professionally inviting with others. The teacher is ready to help students improve their school performance.

Understanding student behavior in the classroom helps teachers to begin to be professionally inviting with students. The Florida Key (Purkey, Cage, & Graves, 1973) is an instrument which can provide this understanding by assessing school performance. Four factors--relating, asserting, investing, and coping--- assess students' self-concept as a learner. Relating indicates a level of trust and appreciation that students have with others. Asserting relates to students' ability to try out new things, to explore, to guess, and to do things on their own. Students see themselves as having control over what happens to them. Investing relates to students' trust in their potential. By feeling good about themselves, students are more willing to risk failure and ridicule. The last factor, coping, indicates a trust that students have in their academic ability and also shows the extent to which students fulfill requirements. It includes the success that students experience in school work.

Purkey and Novak (1984) feel that a balance is needed in the four areas of being personally inviting with oneself, being personally inviting with others, being professionally inviting with oneself, and being professionally inviting with others. "The ideal teacher, from an invitational education viewpoint, is one who orchestrates all four areas of functioning, taking care to develop equally in each area" (p. 87).

Inviting family. Novak (1983) describes an inviting school by using a metaphor of the school as an "inviting family" as opposed to an "efficient factory." Five elements of an "inviting family" are important: "1) respect for human uniqueness, 2) cooperative spirit, 3) sense of belonging, 4) pleasing habitat, and 5) positive expectations" (p. 9).

To have an inviting school, personnel need to have the desire and enthusiasm to behave in an intentionally inviting manner. To be always inviting to others involves maintaining an inviting stance with oneself personally and professionally and with others personally and professionally. These four areas of inviting are intertwined and to be intentionally inviting one needs to refine the four areas discussed to become a "long distance inviter" (Novak, 1983, p. 9).

The belief that teachers invite or disinvite students to learn is at the heart of invitational education (Purkey, 1978; Purkey & Novak, 1984). The description of the Invitational Teaching Model included basic assumptions, areas of inviting, and a metaphor of the school as an "inviting family." In life a basic goal is "to become more than what we are today" (Schmidt, 1981, p. 3). To do this requires planning. As with continuously sending appropriate invitations, a degree of intentionality is necessary. An essential ingredient in the inviting process is planning. These skills are indicated by the steps of preparing the setting, developing trust, and reading the situation. The "artfully inviting teacher is one who is optimally successful in guiding and facilitating student development--social, emotional, physical, and intellectual" (Russell, Purkey, & Siegel, 1982, p. 35).

Although the theory of invitational teaching is recent, research supports the concept. The major underlying assumptions of the theory are the following:

1. Students cannot develop optimally without being invited to do so. Students want to be confirmed as able, valuable, and responsible by significant others.
2. The teacher always has the power to determine the quality and quantity of invitations and disinvitations extended to students.

3. When the teacher extends an invitation, he or she has the responsibility to insure that the student has a reasonable chance of accepting and acting upon it successfully. (Novak, 1978, pp. 7-9)

Research on the model

Five studies have investigated the concept of inviting teaching (Inglis, 1976; Lambeth, 1980; Ripley, 1985; Smith, 1985; Turner, 1983). The Inviting--Noninviting Scale (IN-Scale) was developed by Inglis (1976) to record student perceptions of inviting/disinviting teacher behavior and effectiveness. She designed the IN-Scale to measure student perceptions of inviting-effective teaching behaviors and studied invitations and effectiveness in a post-secondary setting of general and technical education. Lambeth (1980) used the IN-Scale to study Inviting Type (I-Type) and Effective Type (E-Type) teacher behaviors in a secondary setting of general and technical subjects. Turner (1983) used the IN-Scale to study I-Type and E-Type teacher behaviors in physical education teachers in the secondary setting.

Ripley (1985) adapted the Invitational Teaching Survey (ITS) to describe teaching behaviors of nursing instructors in a clinical setting and adapted the Student Affective Outcome Measures (SAOM) to describe student affective outcomes in a clinical setting. Then she studied the relationship between the attitudes of associate degree nursing students toward clinical learning experiences and their perceptions of inviting behaviors of clinical instructors. Smith (1985) replicated the present study with a sample of graduate nursing students. Results of all five studies indicated that inviting teachers tend to be effective teachers.

Inglis (1976) reported that all of the factors of the IN-Scale--caring, respect, course organization, interpersonal contact, and learning environment---were significantly related. These results indicated that the factors represent-

ing teacher behaviors on the IN-Scale are related. Results indicated that students who reported receiving high grades in the course also reported high I-Type and E-Type teacher behavior scores. This finding was also true for the relationships between teacher behaviors and student reports as to how hard they worked and how much they learned in the course. Respect was the only factor that did not correlate significantly with teacher behaviors and student report of how much they learned. Results also indicated that general education teachers are rated higher on I-Type and E-Type behavior scores than technical-education teachers (pp. 71-78). She concluded that "teachers exhibit behaviors that create environments highly related to academic achievement of their students" (p. 81).

Lambeth (1980) also used the IN-Scale (Inglis, 1976) to study the I-Type and E-Type behaviors of teachers, but she used teachers in a secondary school setting who taught general and technical subjects. Her results supported the findings of Inglis (1976). In the Lambeth (1980) study, students who perceived I-Type and E-Type teacher behaviors expended more effort in a course but the relationship of these behaviors to effort was less than to their learning and grades earned (p. 85). She also found that sets of behaviors were significantly related to student achievement, including an E and I-Type set, and E-Type set, and an I-Type set. There was no I-Type set of behaviors for effort and learning and E-Type set for grades, when E and I-Type behaviors were studied separately (p. 87). She concluded that "teachers need to exhibit combinations of behaviors, rather than single behaviors, to impact student achievement significantly" (p. 87).

Turner (1983) used the IN-Scale (Inglis, 1976) to study teacher invitations and effectiveness as reported by physical education students in a second-

dary setting. Results showed that a significant positive relationship existed between total scores of inviting and total scores of effective teacher behaviors. Inviting Type behaviors included caring and respect; Effective Type behaviors included course organization, interpersonal contact, and learning environment. He also found that 50% of the physical education teachers were seen as showing disinviting-noneffective behaviors. The students who were perceived by their teachers as having success in physical skills rated their teachers higher on inviting and effective behaviors than students with low expectancies by their teachers. No significant differences were found between the inviting and effective behaviors as rated by athlete and nonathlete students, by how much students felt they had learned, and by how hard they felt they had worked in the class.

Ripley (1985) adapted the ITS and the SAOM so that the items would be applicable to nursing clinical teaching experiences. The revised ITS and SAOM is called the Clinical Teaching Survey (CTS). The reliability of the revised ITS was .82 for the split-half and .94 for Cronbach's alpha. The split-half reliability for the revised SAOM was .77 and .90 for Cronbach's alpha. The sample consisted of associate degree nursing students. Results showed a strong relationship between their perceptions of inviting teaching practices of clinical instructors and their attitudes toward the clinical experience.

Smith (1985) replicated the present study using the ITS to assess inviting teacher practices and the SAOM to assess student affective outcomes as reported by graduate nursing students. She found a strong positive relationship between inviting teacher practices and student affective outcomes. Reliability of the ITS and SAOM, using Cronbach's alpha, was .93 for both instruments. A detailed comparison of the results of both studies is presented in Chapter V.

The goal is to increase teachers' awareness of their practices. As a result, their performance and effectiveness will improve. In invitational education, "the key to being inviting is intentionality," (Novak, 1984, p.4). If teachers receive feedback about their professionally and personally inviting practices from ratings on the Invitational Teaching Survey (ITS) and about student affective outcomes, they can gain a clearer perspective of their inviting stance. Consequently, they can learn ways to become more intentionally inviting. Critical skills in the inviting process are the teachers' ability to read situations and to send appropriate invitations (Novak, 1984). "It is obvious that intentional changes in teaching style may be important elements of teacher performance skill; the wisdom a teacher shows in making such changes may well be a major determiner of how effective the teacher is" (Medley, 1982, pp. 1898-1899).

Research has shown that many people are interested in studying the teaching-learning environment because of the importance of continuing to improve teacher effectiveness. Although there is an apparent wealth of information on teaching, it remains fragmented and lacks coherence for both practitioners and researchers. A theory-based evaluation of teachers is needed more than a list of characteristics of good teaching.

This study was designed to investigate the relationships between inviting teacher practices and student affective outcomes. To do this, instruments were needed to measure professionally and personally inviting teacher practices and to assess student affective outcomes. Since teacher evaluation instruments tend to focus on professionally inviting practices, a new instrument--the Invitational Teaching Survey (ITS)--was developed to provide ratings on scales designed to measure both professionally and personally inviting practices.

Similarly, an instrument was needed to measure student affective outcomes that should be influenced by invitational teaching practices. The Student Affective Outcome Measures (SAOM) was developed to meet this need.

Summary

This review of literature presented five areas of research pertinent to this study: (1) teacher evaluation, (2) affective outcomes, (3) validity of student ratings, (4) characteristic behaviors of good teachers, and (5) invitational education. There is no doubt that evaluating teacher performance and effectiveness is essential to improving the teaching-learning environment. Knowing what students like and feel about educational experiences can be invaluable to teachers in developing positive classroom environments. Student evaluation of teacher behaviors relates significantly to cognitive and affective outcomes, and therefore serves as one indicator of teacher effectiveness. Studies of behaviors of good teachers indicate that the student-teacher relationship is important in promoting effective teaching.

At the core of invitational education is the assumption that teachers have the power to invite or disinvite students. These invitations by teachers should be intentional so students are confirmed as capable and valuable people. Research findings in these five areas strongly support the development of the present study which examined the significance of the relationships between professionally and personally inviting teacher practices and student affective outcomes. Chapter III will discuss selection of subjects, instruments, collection of data, and data analysis.

CHAPTER III

METHODS AND PROCEDURES

This chapter presents the methods and procedures used in the present study. The major purpose of this study was to determine the importance of professionally and personally inviting practices of dental hygiene teachers by relating them to student affective outcomes. To achieve this purpose, directors of 25 dental hygiene programs in Georgia, North Carolina, South Carolina, Virginia and West Virginia were contacted and requested to participate in the study (see Appendix L for letter to directors). The request asked for permission to administer the Invitational Teaching Survey (ITS) and the Student Affective Outcome Measures (SAOM), and to obtain demographic data on one class of students of full-time dental hygiene instructors at each school. Twenty-two (88%) of 25 schools volunteered to participate in the study. The final sample included 74 (93%) of 80 dental hygiene instructors who the directors initially said would participate. One director reported that one teacher was in the hospital; one director never returned the surveys for three teachers; and two directors did not return the surveys for one of their teachers.

In this study two instruments were used. The first was the 43-item Invitational Teaching Survey (ITS), and the second was the 20-item Student Affective Outcome Measures (SAOM). The development of each instrument is presented.

Invitational Teaching Survey (ITS)

The ITS (Appendix A) is a 43-item scale designed to measure personally and professionally inviting teacher behaviors. The scale contains five subscales,

further divided into 10 dimensions. This Likert-type instrument was developed by Amos, Purkey and Tobias (1984). Respondents select one of five categories of response for each item--"very seldom or never," "seldom," "occasionally," "often," and "very often or always." This final scale was changed slightly from the original pilot ITS which contained 65 items (see Appendix C) and was used in the factor analysis and reliability studies. The "very seldom" category was changed to "very seldom or never" since some students commented that teachers never exhibited some of the practices listed on the ITS. Also, the "very often" category was changed to "very often or always." Positively stated items are scored 1, 2, 3, 4, and 5. Negatively stated items are scored 5, 4, 3, 2, 1. See Appendix T for scoring instructions. Thus the higher the score, the greater the inviting teaching practices.

Two types of validity evidence for the ITS were developed. The first consisted of a judgment made by experts (who had published or conducted research in the area of invitational education), college faculty, and college students. The second type of validity evidence was a factor analysis which examined the dimensions or clusters of items. Reliability studies were completed on data collected for the factor analysis.

The methods used in the development of the ITS were (1) initial item identification, (2) validity evidence from judges based on judgments, and (3) validity evidence from a factor analysis study.

Initial Item Identification

All items on the ITS were derived from a synthesis of the literature on teacher evaluation and theory by the authors (Amos, Purkey, & Tobias, 1984). Approximately 400 items taken from various "teacher evaluation" instruments were screened for duplication. One hundred and forty items were chosen and revised

to meet the following guidelines: (1) all items were written in behavioral terms; (2) all items were grammatically consistent; (3) all items were stated positively (half to be reversed on the final ITS); and (4) all items appeared to measure either personally inviting or professionally inviting teacher practices. Each of the 140 items were juxtapositioned with three response choices: (1) professionally inviting, (2) personally inviting, and (3) can't say. (see Appendix B).

Validity Evidence based on Judgments

The 140-item questionnaire was administered to several sample groups during January and February, 1984. The nonrandom sample of judges consisted of the following groups: (1) 15 (7%) "expert" judges who had published or conducted studies in invitational education; (2) 16 (7%) Guilford Technical Community College (GTCC) faculty including four from nursing, nine from dental, and three from engineering departments; (3) 31 (14%) students at the University of North Carolina at Greensboro; and (4) 157 (72%) students at GTCC including 41 from nursing, 36 from dental hygiene, and 80 from engineering. The total sample was 219. The following demographic data were collected on all judges except the "experts": sex, age, year in school, and major. Since not every subject completed the demographic data, the summary which follows represents an approximate description of the sample. There were approximately 114 (56%) females. Most students were between 18 and 28 years old (68%). Sixty-eight percent were either freshmen or sophomores in college. Eighty-four percent were majoring in either dental hygiene, nursing, or engineering. See Table 3 for a complete description of the sample.

Table 3**Description of Sample of Judges**

Category	N	Percentage
<u>Sex</u>		
Male	88	44
Female	114	56
<u>Age</u>		
<17	2	1
18-28	135	68
29-35	41	21
40-50	16	8
>50	4	2
<u>Class</u>		
Freshman	46	24
Sophomore	82	44
Junior	7	4
Senior	19	10
Graduate	33	18
<u>Major</u>		
Dental Hygiene	36	19
Nursing	41	22
Counseling	9	5
Business	1	<1
Engineering	80	43
Other	21	11

Note. N = 219

Final item selection. Frequency distributions of responses for each group of judges in the sample were obtained with the corresponding percentages of ratings for each item. Review of the literature suggested that the acceptance criterion used in similar studies varies and ranges from 50%-100% (Marsh, Overall, & Kesler, 1979). The percentage of responses for each item was reviewed, and it was decided to select items with a rater congruence range of 50% to 100%. For the 34 professionally inviting practices selected, 91% had rater congruence of 66% or above, and nine percent had rater congruence of 60%. For the 31 personally inviting practices selected, 86% had rater congruence of 60% or above, and 14% had rater congruence between 50-59%.

The final selection of professionally and personally inviting teacher practices was made by having the statements sorted into one of three categories: relating, investing, and asserting. These categories have been described by Purkey and Novak (1984) as important dimensions in the invitational approach to teaching. Relating is a level of trust and appreciation that the teacher maintains towards students. Asserting is teacher behavior that exerts control over what happens in the classroom. Investing behavior shows a teacher's willingness to do new things and make a commitment to students. Thirty-four professionally inviting teacher practices were chosen with nine relating, 15 asserting, and 10 investing. Thirty-one personally inviting teacher practices were chosen: 12 relating, 14 asserting, and five investing.

The item revisions involved (1) alterations in the manner in which half of the items were stated and (2) a pilot test. Fifty percent of the personally inviting items and 50 percent of the professionally inviting items were randomly selected and changed from a positive to a negative wording to reduce student response set bias in rating an instructor. Then the 65 items were randomly

positioned on the preliminary ITS instrument (Appendix C). To assure the clarity of design and instructions and to test the length of time to complete the ITS, it was pilot tested on four volunteer subjects--one male high school senior at Northwest Senior High School in Guilford County, one older adult female student at the University of North Carolina at Greensboro, and two women in their 20s who had dropped out of college to work. A few ambiguities in wording were corrected. The average time to complete the ITS was approximately 15 minutes.

Validity Evidence from a Factor Analysis Study

A factor analysis (Hair, Anderson, Tatham, & Grablovsky, 1979) was conducted to provide further evidence of the constructs purportedly measured by the ITS, to analyze the interrelationships between the items, and to explain the items in terms of underlying dimensions.

Field test of the 65-item ITS. Data were collected from 1491 students of 75 high school, college, and university teachers during the months of April and May, 1984. Only one teacher who had agreed to participate failed to return the surveys. The sample of high school, undergraduate, and graduate students consisted of 1491 students enrolled in classes at the following schools:

University of North Carolina at Greensboro (UNC-G), Greensboro College (GC), North Carolina Agricultural and Technical University (NCA&T), Rockingham Community College (RCC), Forsyth Technical Institute (FTI), Guilford Technical Community College (GTCC), Technical College of Alamance (TCA), and Forsyth County Schools (FCS). Summary statistics are given in Table 4.

Table 4**Description of Sample used for Field Test of 65-item ITS**

	UNC-G	GC	NCA&T	RCC	FTI	GTCC	TCA	FCS	TOTAL
Number of Students	501	13	165	47	62	452	71	180	1491
Percentage	34%	1%	11%	3%	4%	30%	5%	12%	100%
Number of Teachers	27	2	5	1	3	27	5	5	75

Because approximately 20 percent of the students did not complete the questions requesting demographic data, the demographic description is an approximation. There were 508 (35%) males and 930 (65%) females. The ages were as follows: 102 (7%) students below 17; 960 (67%) students between 18 and 28; 270 (19%) between 29 and 39; 81 (5%) between 40 and 50; and 28 (2%) over 50. There were 417 (36%) students who were either freshmen or sophomores in college and 150 (13%) who were juniors, 136 (12%) who were seniors, and 266 (23%) who were graduate students. There were 180 (16%) high school students. The racial composition was as follows: 289 (26%) black; 794 (71%) white; 10 (less than 1%) Hispanic; 9 (less than 1%) Oriental; and 20 (2%) other. Students were enrolled in a variety of classes and programs, including data processing, secretarial science, dental assisting, English, math, physics, science, business administration, law enforcement, nursing, child care, medical assisting, psychology, educational psychology, education, and counseling.

Instructions given to students, the student proctor, and the volunteer teachers are presented in Appendix C along with the ITS and demographic data questions. To insure that students' rights to confidentiality were protected,

a student volunteer acted as proctor. Responses were recorded on 3M scantron sheets with number-two pencils.

The ratings were analyzed using SAS (Ray, 1982a; 1982b) programming of the principal component factor analytic program and Varimax rotation procedures, other statistical procedures for calculating normative data, and the Spearman-Brown correlation coefficient for the split-half reliability.

After a number of varimax rotations (designating none, two, four, five, six, and eight factors), it was found that a four-factor solution, which accounted for 67% of the total variance, was the most meaningful interpretation. Twenty-three of the items had factor loadings of 0.50 or above; 15 items had loadings between 0.40 and 0.49; two items had loadings of 0.32 to 0.39. Tables 5 and 6 present rotated factor matrices for personally (Factors I and II) and professionally (Factors III and IV) inviting practices. Item 50 was reworded and placed in Factor IV by a judgment of the authors even though it loaded in Factor II. Item 24, which was retained for Factor V, had a loading of 0.71 when the number of factors was not designated, 0.62 when eight factors were designated, and 0.64 when six factors were designated. Appendix D presents full results of the factor analysis.

Factor I, *commitment*, was measured by scales as *disclosing*, *supporting* and *investing* and accounted for 27% of the factor variance. Factor II, *consideration*, was measured by such scales as *attending*, *affirming*, and *cheering* and accounted for 27% of the factor variance. Factor III, *coordination*, reflected *clarifying* and *informing* and accounted for 25% of the factor variance. Factor IV, *proficiency*, reflected *managing* and *relying* and accounted for 21% of the factor variance. The items which were chosen by the judges to be professionally and personally inviting practices seemed to cluster in similar categories in the

Table 5**Rotated Factor Matrix: Personally Inviting Practices**

	Item Number	Factor I Commitment	Factor II Consideration
Factor I			
	2	0.59	
	5	0.50	
	10	0.57	
	14	0.45	
	16	0.48	
	17	0.67	
	22	0.55	
	32	0.56	
	41	0.50	
	42	0.48	
	47	0.54	
Factor II			
	7		0.48
	9		0.44
	12		0.50
	13		0.54
	27		0.41
	44		0.48
	46		0.65
	49		0.59
	51		0.48
	57		0.65
	58		0.44

Note. N = 1491 student ratings

Table 6

Rotated Factor Matrix: Professionally Inviting Practices

Item Number	Factor III Coordination	Factor IV Proficiency
Factor III		
1	0.34	
23	0.09*	
38	0.38	
40	0.46	
45	0.51	
48	0.54	
53	0.62	
60	0.65	
62	0.53	
63	0.52	
Factor IV		
3		0.63
4		0.47
6		0.53
18		0.55
19		0.60
29		0.47
31		0.46
34		0.48
43		0.48
50		0.12**

* loaded .32 on Factor IV but moved to Factor III

** loaded .42 on Factor II but moved to Factor IV

Note. N = 1491 student ratings

factor analysis. Factors I and II included personally inviting practices and Factors III and IV included professionally inviting practices. One item seemed to be a dimension in itself on several of the factor rotations so the researchers decided to add Factor V, *expectation*, which is considered by the judges to be a professionally inviting practice. *Expectation* means that the teacher

expects high academic performance from students. The final ITS contains 43 items.

Domain representativeness. The factors are referred to as Subscores I-V. Nine of the 11 items that loaded on Subscore I--*commitment*--were found by the judges to be personally inviting and two were professionally inviting. These two professionally inviting items clustered under investing. After reanalysis by the authors, it was decided to include these items under the dimension of personally inviting practices. Ten of the 11 items that loaded under Subscore II--*consideration*--were found by the judges to be personally inviting practices and one item was professionally inviting. Again, the authors made the decision to retain the item under the dimension of personally inviting practices. The single item under Subscore V was a professionally inviting practice. Therefore, 22 of the 43 items of the ITS measure personally inviting practices and 21 items measure professionally inviting practices as determined by the judges, the factor analysis, and decisions by the authors.

The authors subdivided each of the four subscores into clusters. They felt that the clusters would help teachers identify specific practices that they may need to improve. The two major dimensions--personally and professionally inviting practices--are divided as follows:

PERSONALLY INVITING PRACTICES

Subscore I--*commitment* (11 items):

Clusters-

- A. *Disclosing* (three items--2, 5, 17,)
- B. *Supporting* (five items--10, 22 32, 42, 47)
- C. *Investing* (three items-- 14, 16, 41)

Subscore II--*consideration* (11 items):

Clusters-

- A. *Attending* (four items--12, 13, 27, 58)
- B. *Affirming* (four items--9, 46, 51, 57,)
- C. *Cheering* (three items--7, 44, 49)

PROFESSIONALLY INVITING PRACTICES

Subscore III--*coordination* (10 items):

Clusters-

- A. *Clarifying* (four items--48, 53, 60, 63)
- B. *Informing* (six items--1, 23, 38, 40, 45, 62)

Subscore IV--*proficiency* (10 items):

Clusters-

- A. *Managing* (five items--3,4,6,29,43)
- B. *Relying* (five items--18, 19, 31, 34, 50)

Subscore IV--*expectation* (one item)

- A. *Expecting* (one item--24)

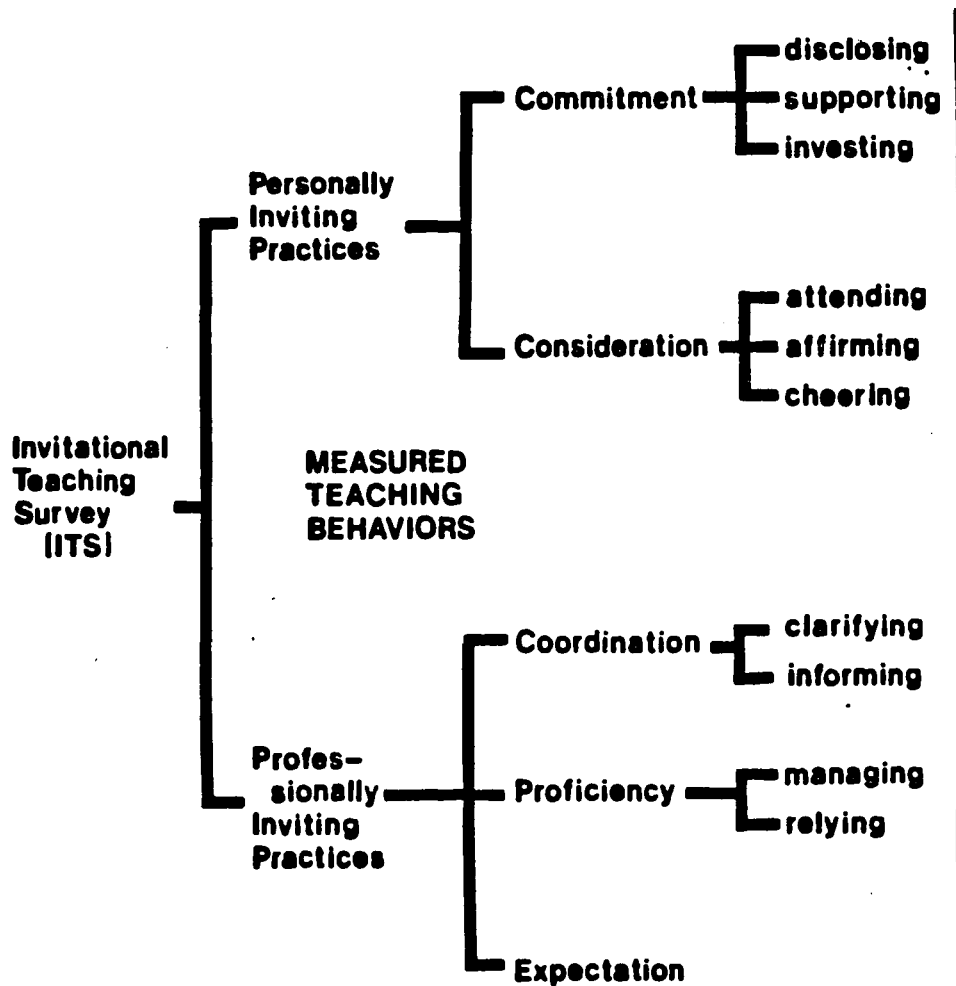
Appendix E contains the 43 items in subscores and clusters as numbered on the final ITS (Appendix A). Note the item numbers are different from the 65-item ITS. Figure 1 presents a breakdown of the ITS subscores.

Normative Data

In Appendix F are normative data on the ITS (initial). Summaries of the mean scores of items in each cluster are in Tables F1, F2, F3, and F4. Further statistical summaries on the five ITS subscores are in Table F5.

Final revisions. The positive or negative wording of the 43 items retained for the final version of the ITS was examined. To eliminate a bias response from students, about half of the items within each cluster under each

Figure 1. Instrument Breakdown Tree: Invitational Teaching Survey (ITS)



subscore was revised to insure that approximately half are stated positively and half negatively. Therefore, about half of the items within each cluster are negative and half positive. The 43 items were then randomly positioned on the survey instrument (Appendix A). These two procedures helped to eliminate

problems with biasing student response due to a consistent pattern of grammatical structure and to a systematic order of placement on the instrument.

Split-half reliability. The Spearman-Brown correlation coefficient for the split-half reliability procedure for the 65 items retained for the factor analysis was .96. The reliability of the 43 items retained for the final ITS was .94. For the subscores, the reliability was as follows: *commitment* was .88; *consideration* was .86; *coordination* was .84; *proficiency* was .77; *expectation* was a single item. A summary of the reliability of the subscores is presented in Table 7. Amos, Purkey, and Tobias (1984) concluded that the ITS subscores have satisfactory reliability particularly for their intended purpose--providing feedback to teachers for improving their personally and professionally inviting practices.

Student Affective Outcome Measures (SAOM)

No appropriate instrument could be found in the literature to measure student affective outcomes. Therefore, the investigator developed the SAOM (Appendix G) which is a 20-item scale designed to measure student affective outcomes related to a particular course. The Likert-type instrument contains four subscales. Respondents select one of four categories of response for each item--"if you **AGREE STRONGLY** with the statement," "if you **AGREE** moderately with the statement, "if you **DISAGREE** moderately with the statement," or "if you **DISAGREE STRONGLY** with the statement." Negatively stated items are scored 1, 2, 3, 4. Positively stated items are scored 4, 3, 2, 1. See Appendix T for scoring instructions. Validity evidence for the SAOM were judgments made by judges from a university and a community college.

Correlation of subscores. Pearson product-moment correlation coefficients were computed for the subscores, and the results are given in Table 8. There

Table 7

Test Reliability of Invitational Teaching Survey (ITS) Subscores

<u>Subscores</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Reliability</u>
COMMITMENT (11 items)	3.865	.760	.88
CONSIDERATION (11 items)	4.248	.741	.86
COORDINATION (10 items)	3.760	.800	.84
PROFICIENCY (10 items)	4.143	.749	.77
EXPECTATION (1 item)	3.976	1.083	
TOTAL (43 items)	4.006	.643	.94

Note. N = 1491

Table 8

Correlation Matrix of Invitational Teaching Survey (ITS) Subscores

	COMMIT- MENT I	CONSIDERA- TION II	COORDINA- TION III	PROFI- CIENCY IV	EXPEC- TATION V	TOTAL
I	1.00	.63	.70	.50	.19	.83
II		1.00	.69	.69	.08	.88
III			1.00	.67	.18	.89
IV				1.00	.12	.82
V					1.00	.21
TOTAL						1.00

Note. N = 1491

was a moderate to high correlation between subscores-*commitment, consideration, coordination, and proficiency*. The values of the correlation coefficients for these data ranged from .50 to .70. There was a high positive relationship between subscores and the total with coefficients from .82 to .89. Subscore, *expectation*, had low correlations with each of the other subscores and the total.

Initial Item Identification

All items on the SAOM were derived from a synthesis of measures collected from a literature review. The investigator classified twenty-six items according to Krathwohl's (1964) affective domain categories. The five categories are (1) receiving--student's willingness to attend to particular phenomena or stimuli (e.g., classroom activities, textbooks, music); (2) responding--student's active participation with emphasis on responding (e.g., reads assignment), willingness to respond (e.g., reads beyond assignment), or satisfaction in responding (e.g., reads for pleasure and enjoyment), interest in responding by seeking out and enjoying activities; (3) valuing--worth or value the student attaches to particular objects, behaviors, phenomena which includes attitudes and appreciations; (4) organization--student's bringing together values, resolving conflict among them, building a consistent value system which develops into a philosophy of life; (5) characterization by a value or value complex---student's value system has controlled his or her behavior for enough time to develop as "life style" (includes social, personal, and emotional patterns of adjustment). Table 9 gives the results. The percentage of items in each of the four categories as judged by the researcher was as follows: (1) receiving--11%, (2) responding--46%, (3) valuing--35%, (4) organization--8%, and (5) charac-

terization by a value or value complex--0%. No items were classified in the fifth category--characterization by a value or value complex. Approximately half of the items were worded negatively. The 26 items were juxtapositioned with three response choices: (1) yes, (2) no, and (3) can't say. (see Appendix H). Judges were asked to judge whether or not the item was an affective outcome.

Table 9

Student Affective Outcome Item Numbers
in Affective Domain Categories

1.	2.	3.	4.
Receiving	Responding	Valuing	Organization
8	5	1	4
10	6	2	7
26	9	3	16
	12	11	17
	14	13	18
		15	19
		20	
		21	
		22	
		23	
		24	
		25	

Validity Evidence based on Judgments

During August and September, 1984, a nonrandom sample of eleven judges completed the questionnaire. Judges consisted of seven professors in the School of Education at the University of North Carolina at Greensboro, the Director of Institutional Research at the University of North Carolina at Greensboro, the testing specialist at Guilford Technical Community College, a doctoral student who helped in the development of the ITS, and the investigator.

Judges were given a definition of student affective outcomes and asked to decide whether each item was a valid measure of student affective outcomes. To identify the categories within the 26 items, the judges were given a copy of the same items with five choices: (1) instructor, (2) course, (3) subject matter, (4) self as learner, (5) other (see Appendix I). They were asked to describe which category best described the item. Two professors in the School of Education at the University of North Carolina at Greensboro and the investigator decided upon the categories based on a review of literature dealing with affective outcomes.

Final item selection. Percentages of judges' ratings about whether or not the item was an affective outcome and what category best described the item were obtained. The percentage of agreement among the judges as to whether or not an item was an affective outcome is given in Table 10.

Table 10

Percentage of Agreement among Judges for Items Retained
as Affective Outcomes

Number of items	Rater agreement
	YES
4 (20%)	91%
7 (35%)	82%
4 (20%)	73%
3 (15%)	64%
1 (05%)	55%
1 (05%)	45%

The percentage of agreement among judges in deciding which category (*course, subject matter, instructor, self-as-learner*) best describes these items is given in Table 11. Complete results are given in Tables 12 and 13.

Table 11

Percentage of Agreement among Judges for Categorizing Items
(course, subject matter, instructor, self-as-learner) Retained as
Affective Outcomes

Number of items	Rater agreement
1 (05%)	100%
11 (55%)	91%
1 (05%)	82%
3 (15%)	73%
2 (10%)	64%
2 (10%)	55%

Table 12

Percentage of Responses of Judges on Affective Outcomes

Item	Yes	No	Can't Say
1	.91		.09
2	.91		.09
3	.91	.09	
4	.73	.09	.18
5	.27	.55	.18
6	.46	.46	.09
7	.73		.27
8	.82	.09	.09
9	.55	.36	.09
10	.46	.27	.27
11	.82		.18
12	.55	.27	.18
13	.82	.09	.09
14	.64	.18	.18
15	.73	.18	.09
16	.82		.18
17	.82	.09	.09
18	.73	.18	.09
19	.82	.09	.09
20	.64	.36	
21	.55	.09	.36
22	.91		.09
23	.64	.18	.18
24	.82		.18
25		.73	.18
26	.64	.18	.18

Table 13

Percentage of Response of Judges
in Categorizing Affective Outcomes

Item	INSTRUC- TOR	COURSE	SUBJECT MATTER	SELF-AS-LEARNER	OTHER
1	.91				.09
2		.91	.09		
3	.91				.09
4	.82			.09	.09
5		.18	.18	.36	.27
6		.18		.82	
7		.36		.55	.09
8		.09		.55	.36
9		.82	.18		
10			100.		
11		.91			.09
12		.41		.50	.09
13	.91				.09
14			100.		
15		.09	.91		
16	.91				.09
17	.91				.09
18	.91				.09
19				.91	.09
20				.73	.27
21	.09	.09		.64	.18
22	.73			.18	.09
23	.04	.09		.78	.09
24			.64	.36	
25		.18	.505	.315	
26		.64	.09	.18	.09

Of the 26 original items, the 20 that were retained to use in this study are as follows:

1. I was uncomfortable in asking questions in this course.
2. This course had value for me as a person.
3. I was afraid to speak up for my own ideas in this course.
4. I feel that my performance in this course was poor.
5. I seemed to get along well with other students in this course.

6. Overall, this course was among the worst I have taken.
7. I would like to take more courses in this subject area.
8. I would not like to have this instructor as a friend.
9. The subject matter was sometimes boring.
10. I do not like this instructor as a person.
11. This instructor is among the best teachers I have known.
12. I would recommend this course to my friends.
13. I related poorly to this instructor.
14. This course helped me to fulfill some personal goals.
15. I am confident about what I learned in this course.
16. I enjoyed learning about this subject matter.
17. I would like to work with this instructor on a project of mine not related to course activities.
18. I dreaded attending this class.
19. I would not recommend this instructor to friends.
20. I would like to take more courses from this instructor.

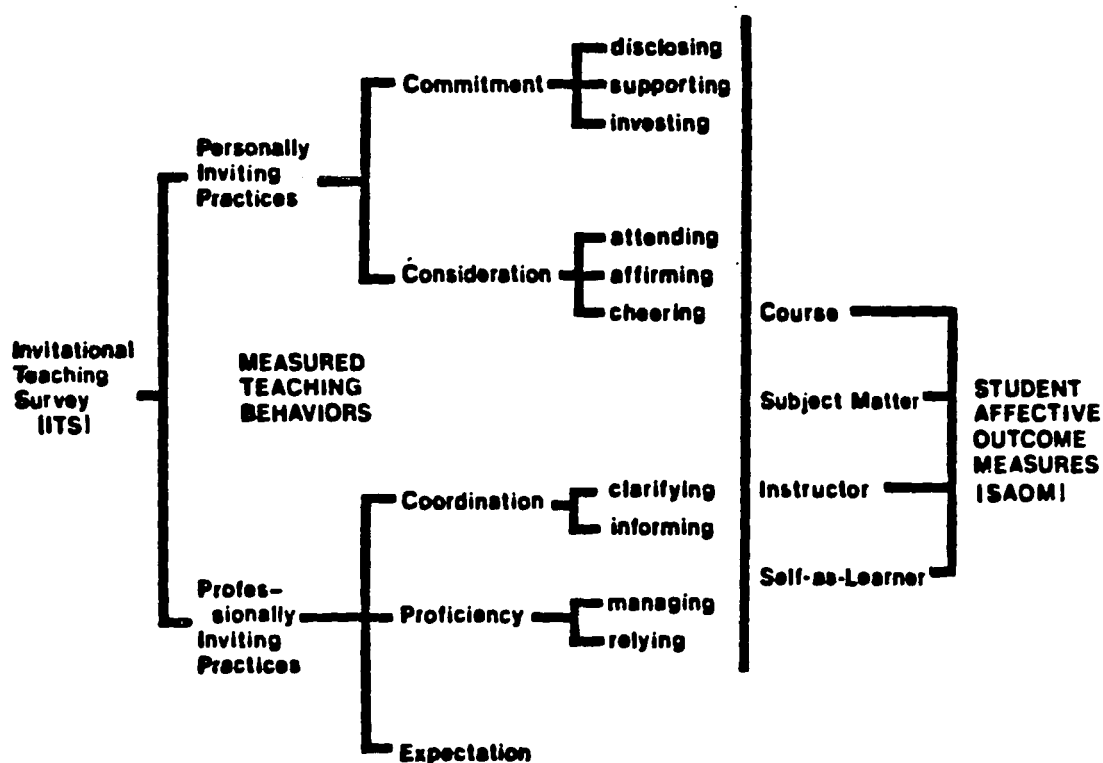
The distribution of items in each category is as follows: *course--3* items, *subject matter--3* items, *instructor--7* items, and *self-as-learner--7* items. See Appendix J for a description of the items in each category. A description of the Instrument Breakdown Tree of the ITS and SAOM subscores is presented in Figure 2.

Reliability evidence. Reliability of the 20 student affective outcome measures is reported in Chapter IV. Results showed that the SAOM is a reliable instrument with a Spearman Brown coefficient of .92 and a Cronbach's alpha of .91.

Final placement of Student Affective Outcome Measures (SAOM)

For the convenience of this study, the 20 SAOM items were added to the 43-item ITS. Items were randomly positioned on the instrument after the investigator checked items in each category to insure that approximately half were worded positively and half negatively. This procedure helps to eliminate a bias response. Students responded to the SAOM as items 44-63. Demographic data questions followed the last SAOM item. The compilation of the ITS, SAOM, and demographic data items and the instructions (Appendix K) were pilot tested on five dental hygiene students to insure clarity.

Figure 2. Instrument Breakdown Tree: Invitational Teaching Survey (ITS) and Student Affective Outcomes (SAOM)



Collection of Data

During October, 1984, the directors of all 25 dental hygiene programs in North Carolina, South Carolina, Georgia, Virginia, and West Virginia were contacted by mail. The purpose of the study was explained, and all dental hygiene faculty from each school were asked to participate in the research. Included with the letter to the directors (Appendix L) were a letter from the president of the American Dental Hygienists' Association endorsing the study (Appendix L), a form indicating participation (Appendix L), instructions for students, ITS, SAOM, demographic data questions for students (Appendix K), general teacher information items and instructions for teachers (Appendix M) and

a stamped return envelope for the participation form. The investigator followed up with a phone call to each school director to explain further the purpose of the study and procedures for administering the ITS, the SAOM, and questions about demographic data. The demographic data questions were multiple choice and related to school, sex, age, college level, and race. Demographic data of students (Appendix K) and teachers (Appendix M) were used to describe characteristics of the sample. Also, the use of 3M scantron sheets and number-two pencils was explained. Twenty-two directors agreed to have 80 teachers participate.

Materials and a memorandum (Appendix N) were mailed to dental hygiene program directors. Administrative procedures were as follows: (1) the teacher explained the purpose of the study; (2) a student proctor was asked by the teacher to volunteer to administer the ITS, SAOM, and questions about demographic data; (3) the student proctor read the instructions to the class on how to complete the ITS, the SAOM, and the general questions (Appendix K); (4) the student proctor collected the surveys, placed them in a prepaid addressed envelope, sealed the envelope, and returned it to the director of the program who mailed them to the investigator. Data were collected from November, 1984 to February 1985. Students from 19 schools completed the surveys in November and December. Students from three schools involving 12 teachers completed the surveys in February. Only one director who initially agreed to participate failed to return the surveys after numerous phone calls and several letters. A Christmas greeting (Appendix N) was mailed to each director thanking the staff for participating in the survey.

A total of 1230 answer sheets from 22 schools and 74 (93%) teachers were returned. Twenty answer sheets were deleted due to large amounts of missing

data leaving 1210. The investigator noted that some students were confused on the difference in the five-point scale used with the ITS items and the four-point scale used with the SAOM items. These students occasionally marked fives on the four point scale which was an indication that they did not understand the instructions. Therefore, 165 students were deleted from the sample, resulting in a total of 1045 students. The number of students per teacher ranged from 4 to 33. See Appendix O for complete data on the number of students per teacher.

Data Analysis

This study was a correlational study designed to investigate the relationships between teacher practices and student affective outcomes. The predictors of student affective outcomes and differences between professionally and personally inviting teachers and their relationships to student affective outcomes are also examined. The statistical methods selected to analyze and interpret the data were Pearson product-moment correlation, canonical correlation (Levine, 1977), multiple regression, *t* test, *anova*, Cronbach's alpha (Cronbach, 1951), and Spearman-Brown prophecy formula (Thorndike, 1982). Analysis was completed using SAS programming (Ray, 1982a; 1982b) and SPSSX (SPSSX, Inc., 1983) programming on the Vax system at the University of North Carolina at Greensboro. Statistical methods were applied to the proposed major questions. Pearson product-moment correlation was used to test in questions 1, 2, and 4. The *t* test also was used in question 4. Multiple regression, canonical correlations, and *anova* were used to test questions in question 3. The .01 alpha level of significance was applied where appropriate.

The four major questions of the study were the following:

1. Is there a positive relationship between inviting teacher practices and student affective outcomes?

2. Is there a positive relationship between professionally inviting and personally inviting teacher practices and student affective outcomes?
3. Are there differences, if any, between professionally inviting and personally inviting teacher practices in their relationships to student affective outcomes?
4. Is there a positive relationship between professionally inviting and personally inviting teacher practices?

These major questions were expanded to include the following corollary subquestions:

1. Is there a positive relationship between total ITS score and total SAOM score?
 - a. Is there a positive relationship between professionally inviting ITS score and total SAOM score?
 - b. Is there a positive relationship between personally inviting ITS score and total SAOM score?
2. a-d. Are there positive relationships between total ITS score and SAOM subscores--(a) *course*, (b) *instructor*, (c) *subject matter*, and (d) *self-as-learner*?
 - a-d. Are there positive relationships between professionally inviting and personally inviting ITS scores and SAOM subscores?
3. a-d. Are any of the ITS subscores (*commitment*, *consideration*, *coordination*, *proficiency*, and *expectation*) predictors of total SAOM (Student Affective Outcome Measures) and subscores--(a) *course*, (b) *instructor*, (c) *subject matter*, and (d) *self-as-learner*?
 - e. Is there a significant difference in student affective outcomes (SAOM total scores) for teachers whose scores vary on professionally inviting and personally inviting practices?

4. Is there a positive relationship between professionally inviting ITS score and personally inviting ITS score?

(a) Is there a significant difference between the ITS score on professionally inviting teacher practices and the ITS score on personally inviting teacher practices?

Summary

Methods and procedures for subject selection, development of instruments, data collection, and research questions including statistical analyses were discussed. The procedures used in the development of the ITS and SAOM substantiate their use in this study. In Chapter IV, further evidence of the validity and reliability of the ITS and data on the reliability of the SAOM are reported along with the results of the present study.

CHAPTER IV

RESULTS

The analyses of results are organized into seven sections. The first is a description of the demographic data collected on the sample. The second section presents data on reliability, correlation of the subscores for the ITS and SAOM, and reference to normative data. The third addresses the relationships between the Invitational Teaching Survey (ITS) and Student Affective Outcome Measures (SAOM). The fourth presents ITS subscore predictors of SAOM. The fifth presents the percentage of teachers with high and low ITS scores on professionally and personally inviting practices. The sixth section reports the differences between SAOM scores. The last reports the correlation between professionally inviting and personally inviting teacher practices.

Description of Demographic Data

Twenty-two (88%) of 25 schools participated in the study. This sample represented 74 (93%) of 80 dental hygiene teachers who the directors initially said would participate. Demographic data completed by 97% or 72 of the 74 teachers included type of school, location (by state), sex, years of teaching experience, years of clinical practice other than teaching, and educational background. There were 61 (85%) females and 11 (15%) males. The majority of teachers were from North Carolina and Georgia, taught in community colleges or public colleges or universities, and had either a bachelor's degree (22%), a master's degree (54%), or a doctorate (20%). About one-quarter of the sample had four or less years of teaching experience, and the remainder had five or more of years experience. The majority (84%) had three or more years of

experience in clinical practice other than teaching. Figures 3-7 portray complete demographic data on teachers.

Figure 3

Teachers by State

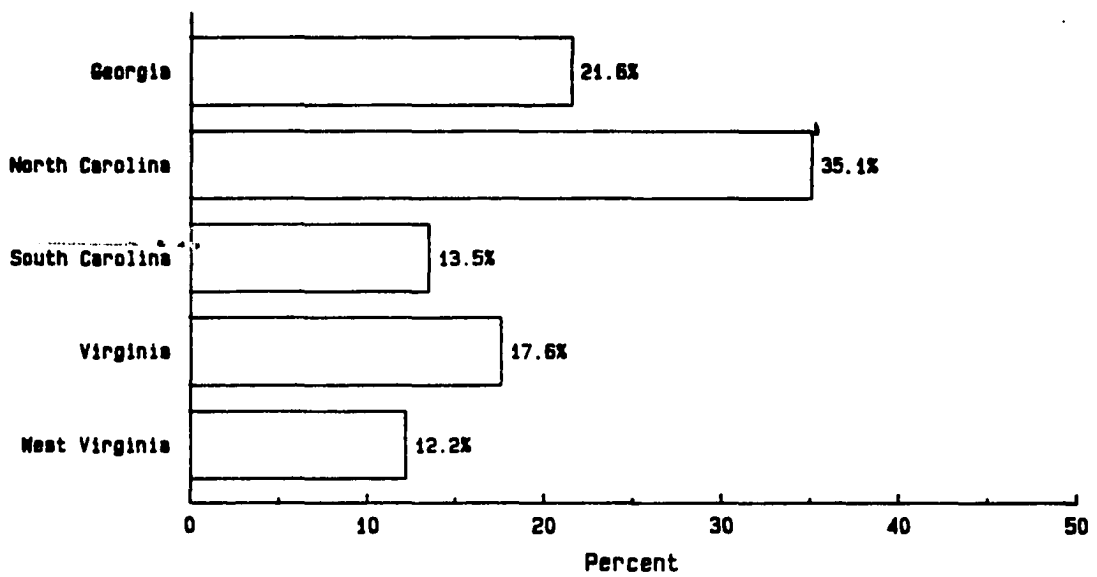


Figure 4

Teachers by Type of School

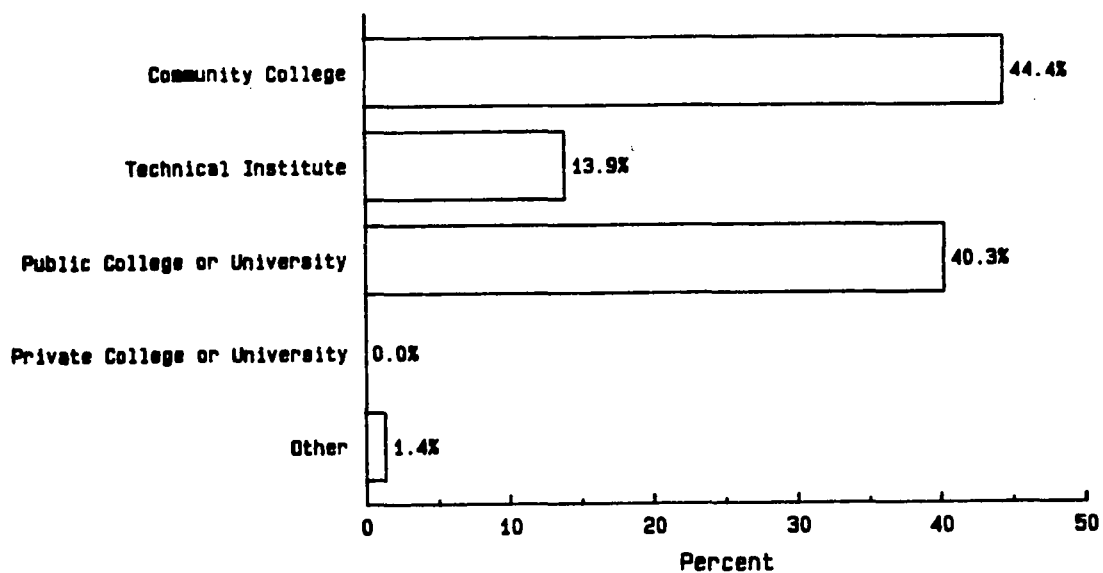


Figure 5

Teachers by Educational Background

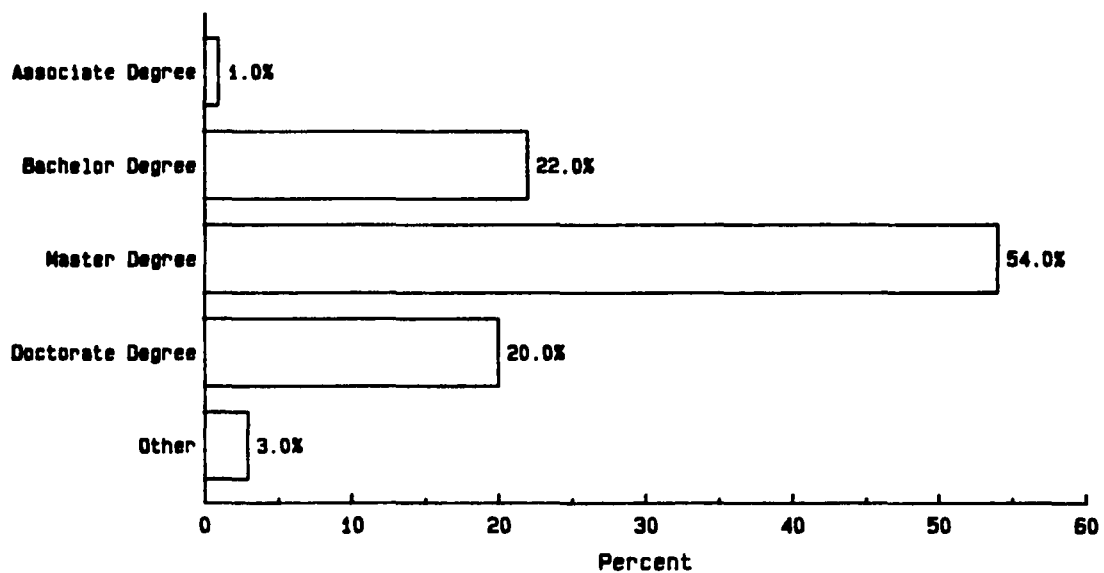


Figure 6

Teachers by Years of Teaching Experience

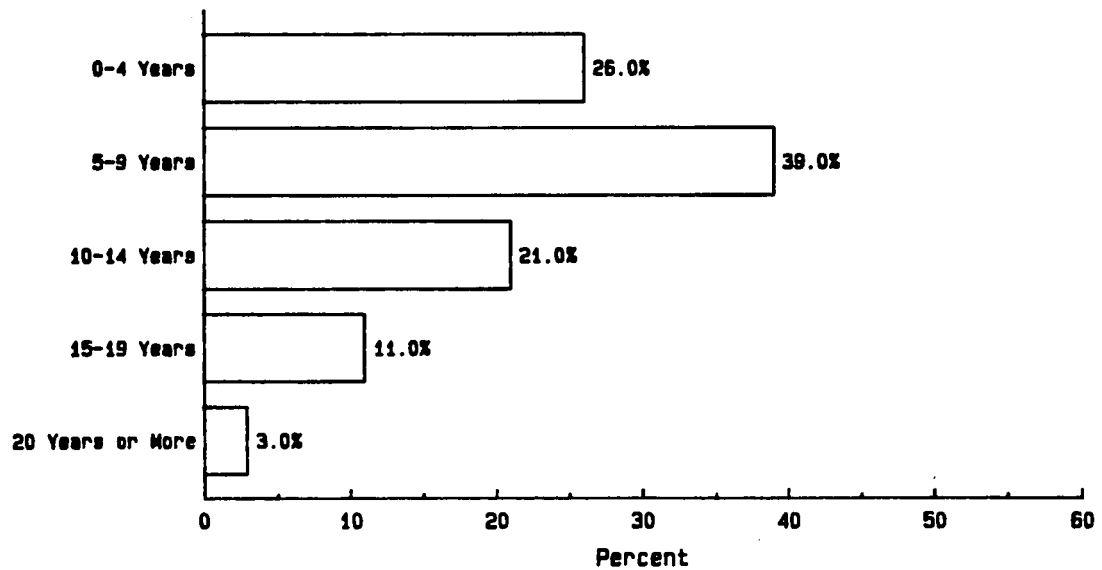
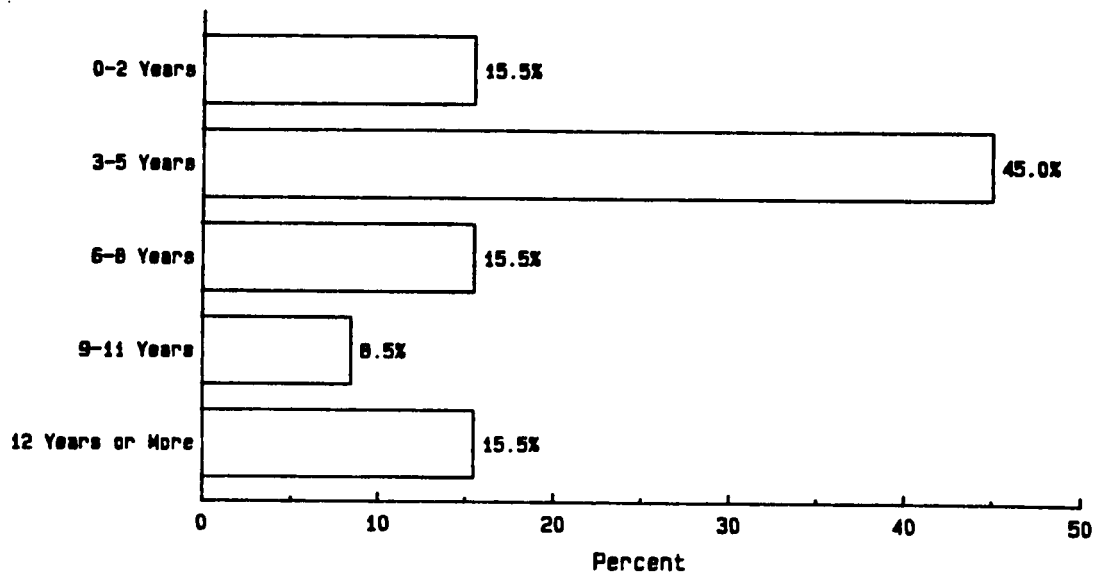


Figure 7

Teachers by Years of Clinical Practice



Demographic data completed by approximately 84% of the students included sex, age, ethnic background, year in college, amount of college prior to entering dental hygiene, formal dental assisting education, and dental assisting work experience. For the question asking their year in college, the dental hygiene students may have been confused since dental hygiene students are referred to as freshmen (first year) and seniors (second year) in a two-year program. Some of the participating schools have four-year dental hygiene programs and graduate programs. Ninety-seven percent of the students were female; 81% were between 18 and 23 years old; 92.4% were white; 64% had 1-3 years of college prior to entering dental hygiene; and 30% had some work experience as a dental assistant. Figures 8-13 portray complete demographic data on the student sample.

Figure 8

Student Sample by Sex

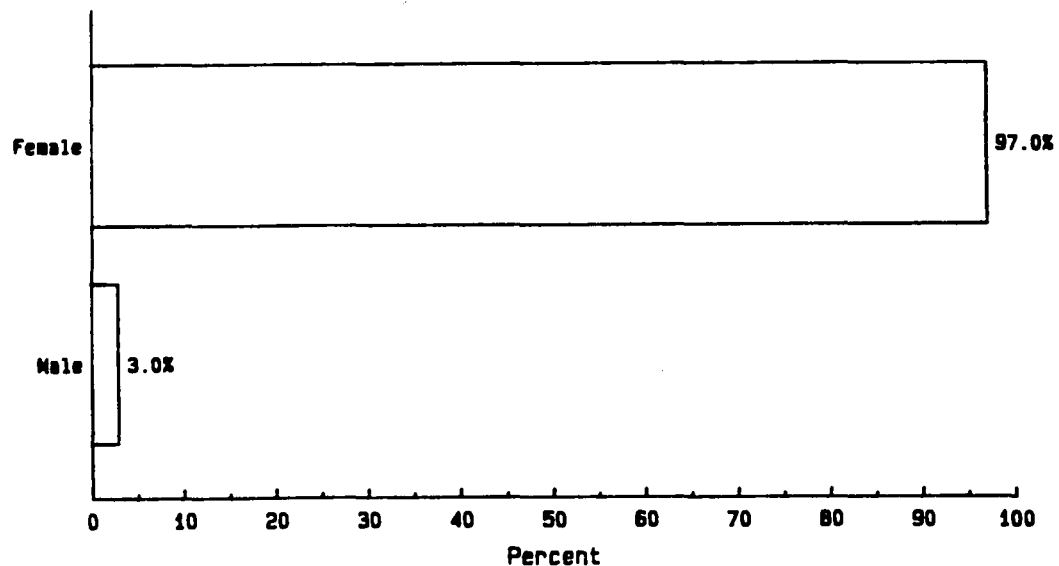


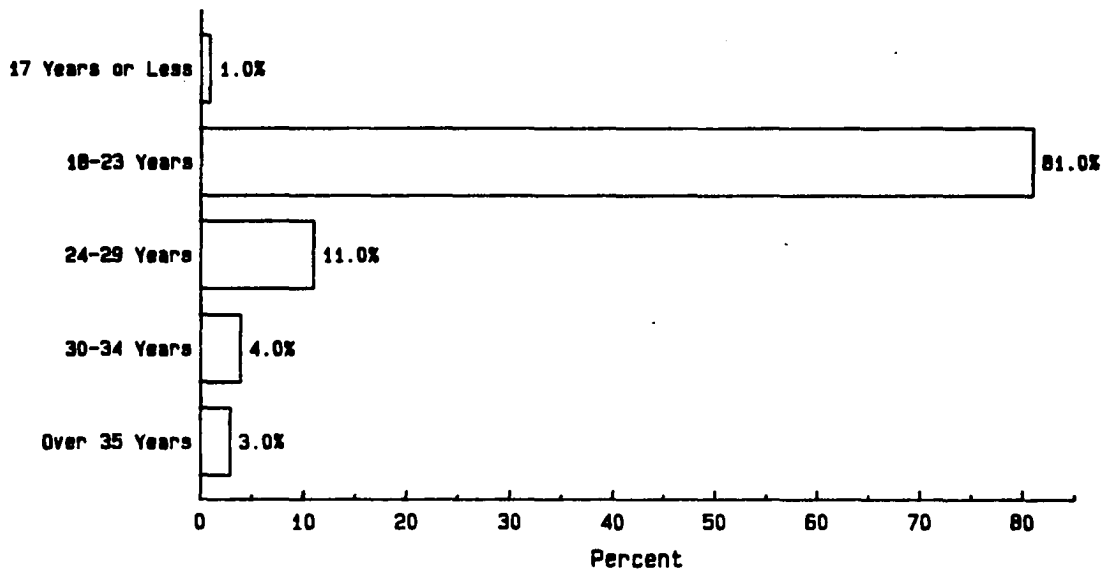
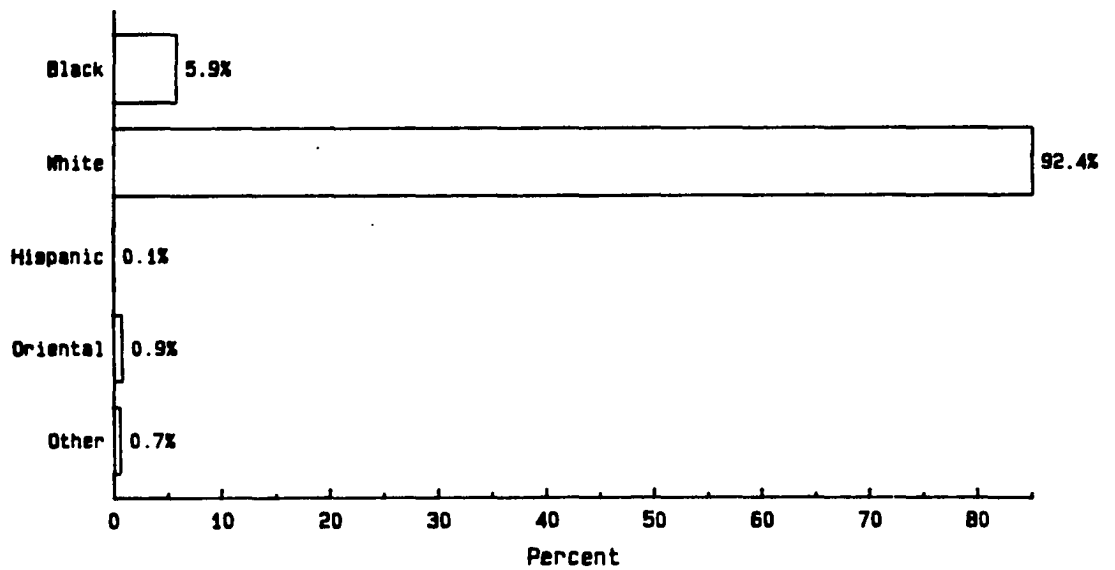
Figure 9**Student Sample by Age****Figure 10****Student Sample by Ethnic Background**

Figure 11

Student Sample by Year in College

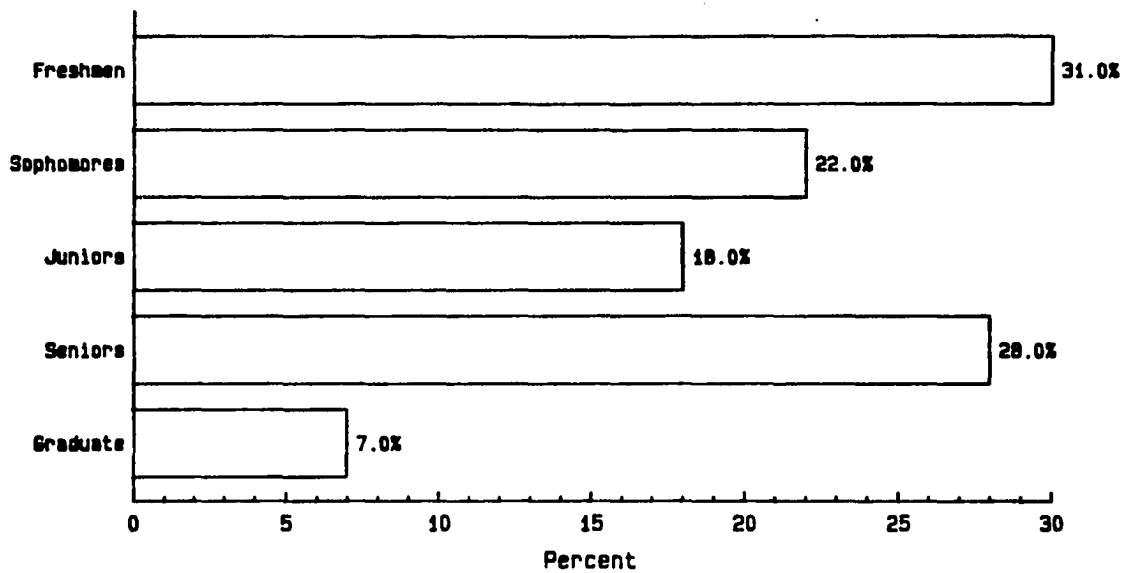


Figure 12

Student Sample by Prior College Experience

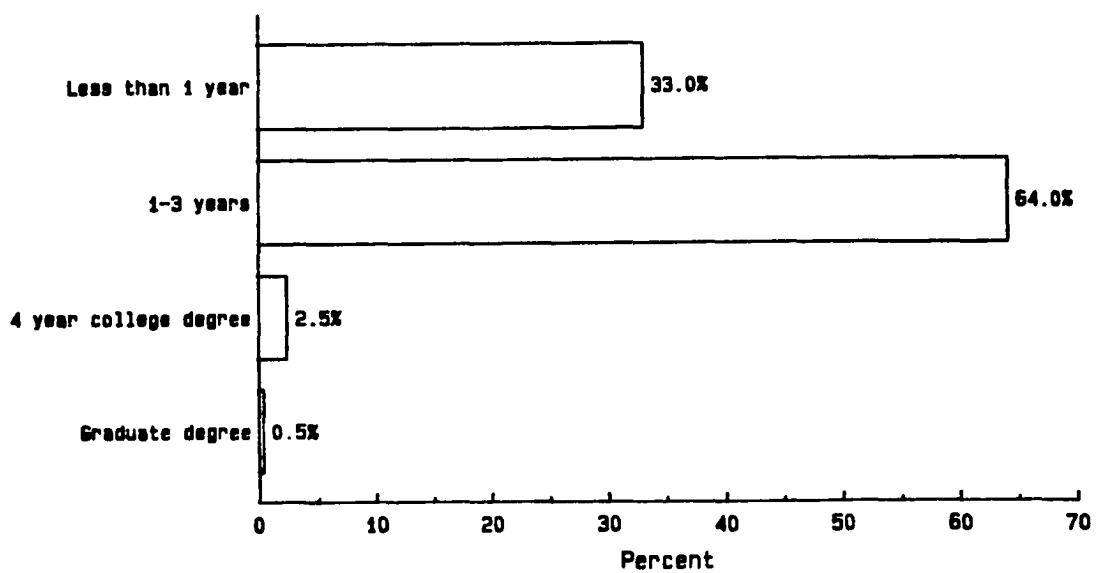
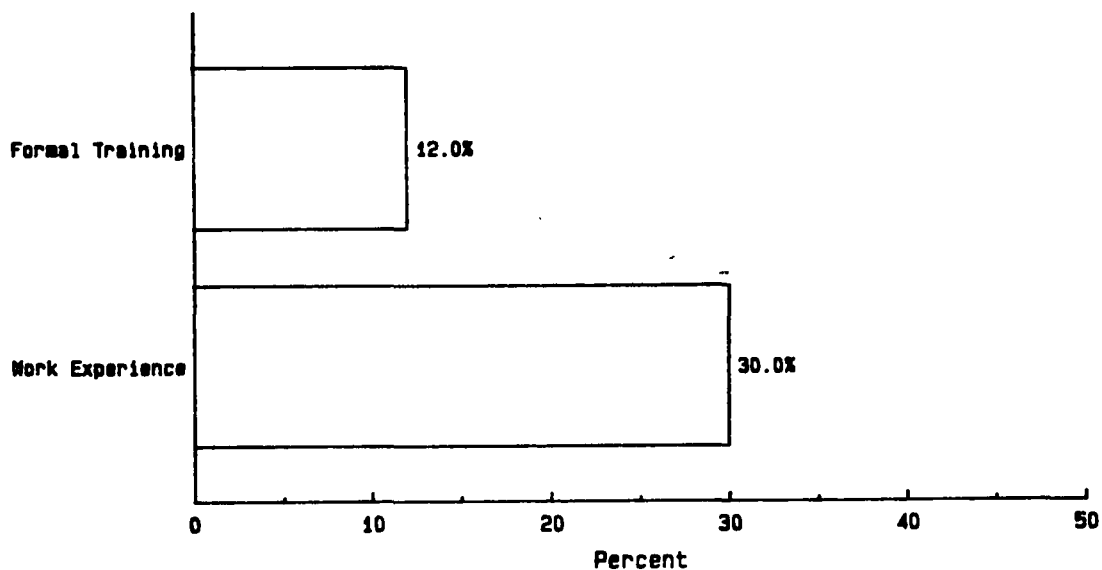


Figure 13
Student Sample by
Dental Assisting Background



Reliability, Correlations, and Norms

This second part presents results on the reliability of the ITS and of the SAOM. Internal consistency estimates of reliability are provided by (1) the Spearman-Brown prophecy formula (Thorndike, 1982) using an odd-even distribution; and (2) Cronbach's alpha coefficient (Cronbach, 1951). Pearson product-moment correlations of the subscores of the ITS and of the subscores of the SAOM are included. Reference is given to normative data.

Reliability

Invitational Teaching Survey (ITS). The Spearman-Brown correlation coefficient for the split-half reliability procedure for the 43 items on the ITS was .96, and Cronbach's coefficient alpha was .95. For the subscores, the split-half reliability (reported first) and Cronbach's alpha (reported second) were as follows: subscore *commitment* was .86, .84; subscore *consideration* was .86, .88; subscore *coordination* was .84, .82; subscore *proficiency* was .81, .81; subscore *expectation* was a single item.

Pearson product-moment correlation coefficients were computed for the ITS subscores. There was a high correlation between four of the ITS subscores and the total ITS score. The values of the correlation coefficients for this data range from .70 to .85. These values indicated a positive relationship between the subscores--*commitment, consideration, coordination, and proficiency*. Subscore *expectation* had low correlations with each of the other subscores and the total ITS score. The range of coefficients for subscore V (*expectation*) was .14 to .17. Subscore V includes only one item. See Table 14 for the correlation matrix.

Table 14

Correlation Matrix of Invitational Teaching Survey (ITS) Subscores

	Commit- ment	Consider- ation	Coordi- nation	Profi- ciency	Expec- tation	Total
	I	II	III	IV	V	
I	1.0	.85	.73	.69	.17	.92
II		1.0	.72	.70	.14	.92
III			1.0	.81	.21	.90
IV				1.0	.17	.87
V					1.0	.22
TOTAL						1.0

Note. N for each calculation ranges from 975 to 1042

Corrected item to total score correlations from Cronbach's alpha procedures for the ITS items were also examined. These correlations ranged from .20 to .74. Thirty-eight of the 43 items had correlations of .40 or above with five of

these items having correlations of .70 or higher (see Appendix Q for a complete list). This analysis used a sample size of 944.

Student Affective Outcomes (SAOM). The split-half reliability of the 20 items on the SAOM was .92, and Cronbach's alpha was .91. Cronbach's alpha on the SAOM subscores was as follows: *course* .70, *subject matter* .71, *instructor* .85, *self-as-learner* .72. See Table 15 for complete reliability results for the ITS and SAOM.

There was a moderate to strong correlation between SAOM subscores--*course*, *subject matter*, *instructor*, and *self-as-learner* using Pearson product-moment correlations. The values of the correlation coefficients for this data range from .51 to .68. There was a strong relationship between all subscores and the total SAOM score with correlation coefficients ranging from .75 to .89. See Table 16 for the correlation matrix.

A corrected item to total score correlation from Cronbach's alpha procedures was also examined for SAOM items; correlations ranged from .25 to .71. Sixteen of 20 items had correlations of .40 or above. Three items had coefficient alphas of .70 or above (see Appendix Q for complete results). This analysis used a sample of 944.

The investigator concluded that the ITS and the SAOM have satisfactory reliability, particularly for their intended purpose--providing feedback to teachers for improving their personally and professionally inviting practices.

Norms

For normative data on the 74 dental hygiene teachers, see Appendix R for data on the ITS and Appendix S for data on the SAOM. Total scores and subscores are included in the norms. Each teacher's mean score on the ITS and SAOM was converted to a standard z score. Only one teacher's scores

Table 15**Test Reliability of Invitational Teaching Survey (ITS) and Student Affective Outcome Measures (SAOM)**

Standard Subscores	Mean	Spearman Deviation	Brown	Cronbach's Alpha
<u>ITS</u>				
Commitment (11 items)	43.45	7.870	.86	.84
Consideration (11 items)	45.000	8.255	.86	.88
Coordination (10 items)	4.244	6.911	.84	.83
Proficiency (10 items)	42.374	6.280	.81	.81
Expectation (1 item)	4.274	.908		
TOTAL ITS (43 items)	175.674	26.736	.96	.95
<u>SAOM</u>				
Course (3 items)	9.503	2.000		.70
Subject matter (3 items)	8.700	2.027		.71
Instructor (7 items)	21.973	4.506		.85
Self-as-learner (7 items)	22.609	3.458		.72
TOTAL SAOM (20 items)	62.874	1.218	.92	.91

Note. N for each calculation ranged from 968 to 1042

Table 16**Correlation Matrix of Student Affective Outcome Measure (SAOM) Subscores**

	Course	Subject Matter	Instructor	Self-as Learner	Total Affect
	I	II	III	IV	V
I	1.00	.67	.66	.68	.85
II		1.00	.51	.59	.75
III			1.00	.66	.89
IV				1.00	.87
V					1.00

Note. N for each calculation ranges from 1006 to 1032 allowing for missing data points

were below -2.5 standard deviations from the mean indicating a fairly normal distribution.

Correlations between ITS and SAOM

The statistical analyses for research questions one and two were analyzed by the Pearson product-moment correlation. The findings are presented as follows: (1) research question stated, (2) answer to question, and (3) review of statistical data.

Correlation between ITS score and total SAOM score

1. Is there a positive relationship between total ITS score and total SAOM score?

The total score on ITS (*consideration, commitment, coordination, proficiency, and expectation*) was positively related with the total score on SAOM (*course, subject matter, instructor, and self-as-learner*). The overall correlation coefficient (.72) (N=943) indicated a strong positive relationship. The results indicated that as students rate teachers higher on the ITS, they also give higher ratings on the SAOM.

Under Research Question 1, there were two corollary subquestions: (a) Is there a positive relationship between professionally inviting ITS score and total SAOM score, and (b) Is there a positive relationship between personally inviting ITS score and total SAOM score? The correlation coefficients were .67 (N=967) and .69 (N=974), respectively. The results indicated again strong positive relationships between professionally inviting teacher practices and SAOM and between personally inviting teacher practices and SAOM.

Correlations between ITS and SAOM--Course

2a. Is there a positive relationship between total ITS score and SAOM subscore--course?

The total score on inviting teacher practices as measured by the ITS was positively related with SAOM subscore--course. The correlation coefficient (.58) (N=963) indicated a moderate positive relationship between inviting teacher practices and how students valued the course. Affective measures of student outcomes included three items about recommending the course to friends, the course having personal value, and the course being among the best courses ever taken.

Under Research Question 2a., there are two corollary questions: (1) Is there a positive relationship between professionally inviting ITS score and SAOM Subscore--course, and (2) Is there a positive relationship between person-

ally inviting ITS score and SAOM Subscore--*course*? The correlation coefficients were .55 (N=989) and .54 (N=997) respectively. The coefficients indicated moderate positive relationships. As noted above, the SAOM subscore relates to how students feel about the course.

Correlations between ITS and SAOM--*Instructor*

2b. Is there a positive relationship between total ITS score and SAOM subscore--*instructor*?

The total score on inviting teacher practices was positively related ($r = .72$) (N=960) with SAOM subscore--*instructor*. Inviting teacher practices and how the students felt about the instructor correlated strongly. The SAOM subscore--*instructor* includes seven items assessing feelings about having the instructor as a friend, liking the instructor as a person, relating to the instructor, taking more courses from the instructor, recommending the instructor to friends, working on a noncourse project with the instructor, and appreciating the instructor as one of the best teachers ever.

Under Research Question 2b., there were two corollary questions: (1) Is there a positive relationship between professionally inviting ITS score and SAOM subscore--*instructor*, and (2) Is there a positive relationship between personally inviting ITS score and SAOM subscore--*instructor*? The correlation coefficients were .62 (N=984) and .73 (N=992) respectively. The results indicated a moderate positive relationship between professionally inviting teacher practices and SAOM subscore--*instructor*. There is a stronger positive relationship between personally inviting teacher practices and SAOM subscore--*instructor*. Since personally inviting practices include items such as is polite to students, shows respect for students, acts friendly towards students,

and involves students in decision-making processes, the results are not surprising.

Correlations between ITS and SAOM--Subject matter

2c. Is there a positive relationship between total ITS score and SAOM subscore--*subject matter*?

The total ITS score on inviting teacher practices was positively related to SAOM subscore--*subject matter*. The correlation coefficient of .47 (N=992) indicates a moderate relationship. The SAOM subscore--*subject matter* included three items--student feelings about wanting to take more courses in the subject matter, finding the subject matter interesting, and enjoying learning about the subject matter.

Under Research Question 2c., there were two corollary questions: (1) Is there a positive relationship between professionally inviting ITS score and student SAOM subscore--*subject matter*, and (2) Is there a positive relationship between personally inviting ITS score and student SAOM subscore--*subject matter*? The correlation coefficients were .48 (N=993) and .41 (N=1,000) respectively. The results indicated a moderate positive relationship between professionally and personally inviting teacher practices and SAOM subscore--*subject matter*. The somewhat higher correlation (.48) between professionally inviting and SAOM subscore--*subject matter* is not surprising since professionally inviting practices include such items as summarizes major points of each lesson at the end of class, evaluates students' work fairly, presents course content in an organized manner, and is prepared for class.

Correlations between ITS and SAOM--Self-as-learner

2d. Is there a positive relationship between total ITS score and SAOM subscore--*self-as-learner*?

The total ITS score was positively related ($r = .59$) ($N=963$) to SAOM subscore--*self-as-learner*. The perceptions about *self-as-learner* included seven items--feelings about performing in the course, being comfortable in asking questions, getting along well with other students, speaking up for their own ideas, fulfilling personal goals, being confident about what they are learning, and looking forward to attending the class.

Under Research Question 2d., there are two corollary questions: (1) Is there a positive relationship between professionally inviting ITS score and SAOM subscore--*self-as-learner*, and (2) Is there a positive relationship between personally inviting ITS score and SAOM subscore--*self-as-learner*? The correlation coefficients were .56 ($N=989$) and .55 ($N=998$) respectively. The results indicated a moderate positive relationship between both professionally and personally inviting teacher practices and SAOM--*self-as-learner*. See Table 17 for a summary of the correlations of the ITS and SAOM.

ITS Predictors of SAOM

Question 3 was analyzed by canonical correlation and multiple regression. The findings are presented as follows: (1) canonical correlation, (2) correlation of ITS and SAOM subscores, (3) research question stated, (4) answer to question, and (5) review of statistical data.

Results of the canonical correlation indicated two statistically significant canonical variates with adjusted canonical correlation coefficients of .75 and .27, respectively. The first variate accounted for 93% of the variance, and the second variate accounted for 6% of the variance. Although the second variate is statistically significant, the first variate accounts for the majority of variance. The correlation coefficients between the canonical variates (variables) and real variables are presented in Table 18.

Table 17

**Correlations of Invitational Teaching Survey (ITS) and
Student Affective Outcome Measures (SAOM)**

	SAOM TOTAL	COURSE	SUBJECT MATTER	INSTRUC- TOR	SELF-AS- LEARNER
ITS Total Score	.72	.58	.47	.72	.59
Profes- sionally Inviting Score	.67	.55	.48	.62	.56
Person- ally Inviting Score	.69	.54	.41	.73	.55

Note. N for each calculation ranges from 943 to 1,000 allowing for missing data points

The interpretation of the canonical variates is inferred from the correlation coefficients in Table 18. The first canonical variate seems to be associated more strongly with higher scores on four of the five ITS subscores--*consideration, commitment, coordination* and *proficiency*. The first canonical variate associated with the four subscores of the SAOM seemed related to higher scores on all four subscores--*instructor, self-as-learner, course* and *subject matter*.

Higher scores on ITS subscores were related to high scores on all subscores

Table 18

Canonical Correlation Analysis for Invitational Teaching Survey (ITS)
Subscores and Student Affective Outcome Measures (SAOM) Subscores

Canonical Correlation	Correlation Coefficients								
	ITS					SAOM			
	COMM	CONS	COORD	PROF	EXPECT	COURSE	SUBM	INST	LEARN
1st	.699	.714	.648	.617	.093	.568	.461	.736	.587
2nd	-.044	-.051	.128	.117	.10	.127	.191	-.052	.106

Note. COMM = COMMITMENT, CONS = CONSIDERATION, COORD = COORDINATION, PROF = PROFICIENCY, EXPECT = EXPECTATION, SUBM = SUBJECT MATTER, INST = INSTRUCTOR, LEARN = SELF-AS-LEARNER

N = 946

of SAOM with the exception of *expectation* (the single item subscore, due to the restricted range of scores (1-5), was difficult to statistically correlate with other subscores). Looking at the highest relationships between the subscores of the ITS and SAOM and the first canonical variate, higher scores on ITS subscores--*consideration* and *commitment*--were related to higher scores on SAOM subscore--*instructor*. On the second canonical variate ITS subscores--*coordination* and *proficiency*--had the highest correlation with SAOM subscore--*subject matter*.

Pearson product-moment correlations indicated that there was a moderate positive correlation between ITS subscores (*consideration, commitment, coordination, and proficiency*) and SAOM subscores (*course, subject matter, instructor,*

and *self-as-learner*). The values of the correlation coefficients for this data range from .39 to .71. There was a weak positive correlation between SAOM subscores and ITS subscore--*expectation*. The total ITS score was strongly related to SAOM subscore--*instructor* and moderately related to the other three SAOM subscores--*subject matter*, *self-as-learner*, and *course*. For a complete correlation matrix of ITS and SAOM subscores see Appendix P.

Multiple regression analyses answered the questions related to which ITS subscores produced the most effect on student affective outcomes. Experiment-wise error was controlled by setting alpha for each of the five regressions at .01. The criterion for the selection of the model for the regressions was the addition of at least two percent to the variance.

3. Are any of the ITS subscores (*commitment*, *consideration*, *coordination*, *proficiency*, and *expectation*) predictors of total SAOM score?

Two of the five ITS subscores--*consideration* (personally inviting), and *coordination* (professionally inviting)--were significant at the .001 level as predictors of the total score on SAOM, accounting for 52% of the variance. *Consideration* was added at step one and accounted for 45% of the variance. *Coordination* was added at step two and increased the variance seven percent (52%). See Table 19 for a summary of the regression results.

Under Research Question 3 there are four corollary questions: Are any of the ITS subscores (*commitment*, *consideration*, *coordination*, *proficiency*, and *expectation*) predictors of the following SAOM subscores--(a) *course*, (b) *instructor*, (c) *subject matter* and (d) *self-as-learner*?

In answer to corollary question (a) in predicting SAOM subscore--*course*, the ITS subscore on *coordination* (professionally inviting) was entered in

Table 19

Summary of Forward Stepwise Regression ResultsInvitational Teaching Survey (ITS) Predictors of Student AffectiveOutcome Measures (SAOM) (Total and Subscores)

	Dependent Variables				
	Total SAOM	Course	Instructor	Subject Matter	Self-as-Learner
Predictors:					
COMMITMENT			(X)		
CONSIDERATION	X	(X)	X		(X)
COORDINATION	[X]	X		X	X
PROFICIENCY				(X)	
R2 FOR MODEL	.52	.33	.53	.24	.35

X = significant at p=.001

() = adds 2-4%

[] = adds 6%

step one and accounted for 30% of the variance. ITS subscore on *consideration* (personally inviting) was added in step two and increased the variance by three percent (33%).

In answer to corollary question (b) in predicting SAOM subscore--*instructor*, the ITS subscore--*consideration* (personally inviting) was entered in step one and accounted for 50% of the variance. *Commitment* (personally inviting) was added in step two and increased the variance by three percent (53%).

In predicting student affective outcomes on corollary question (c) regarding the subscore which measures how students feel about the *subject matter*, two

ITS subscores, which were professionally inviting, were significant predictors at the .001 level. *Coordination* was entered in step one and accounted for 22.7% of the variance. *Proficiency*, which was added in step two, increased the variance by 1.7% (24.4%). It was interesting that the personally inviting subscores were not significant at the .001 level.

In answer to corollary question (d) in predicting SAOM subscore--*self-as-learner*, ITS subscore--*coordination* (professionally inviting) was entered in step one and accounted for 30% of the variance. *Consideration* (personally inviting) was added in step two adding five percent to the variance (35%).

A complete description of the predictions of the personally and professionally inviting practices is included in Table 20. Approximately 52% of the variance in SAOM can be accounted for by the personally (*consideration*) and professionally (*coordination*) inviting teacher practices as measured by the ITS.

Percentage of Teachers with High and Low ITS Scores

The 74 teachers were divided into four groups according to their mean scores (computed from all student scores) on the two major dimensions of the ITS: professionally inviting score and personally inviting score: (1) high high group (HH)--those teachers whose professionally and personally inviting mean scores were both in the top quartile, (2) low-low group (LL)--those teachers whose professionally and personally inviting mean scores were both in the bottom quartile, (3) high-low group (HPRO-LPE)--those teachers whose professionally inviting mean score was in the top quartile and whose personally inviting mean score was in the bottom quartile, (4) low-high group (LPRO-HPE)--those teachers whose professionally inviting mean score were in the

Table 20

Forward Stepwise Regression Results
Student Affective Outcome Measures (SAOM) as Criterion Variable and
Invitational Teaching Survey (ITS) Subscores as Independent Variables

Predictor Variable	R Square	F Ratio for entire equation	Degree of Freedom
<u>Total SAOM Score</u>			
Consideration	0.454	786.08*	1,945
Coordination	0.515	501.17*	2,944
Commitment	0.522	343.81*	3,943
Proficiency	0.527	262.85*	4,942
<u>SAOM--COURSE</u>			
Coordination	0.301	414.10*	1,961
Consideration	0.329	235.44*	2,960
Proficiency	0.334	160.93*	3,959
<u>SAOM--INSTRUCTOR</u>			
Consideration	0.502	968.16*	1,962
Commitment	0.527	536.43*	2,961
Coordination	0.536	370.08*	3,960
<u>SAOM--SUBJECT MATTER</u>			
Coordination	0.227	283.29*	1,965
Proficiency	0.244	152.90*	2,964
<u>SAOM--SELF-AS-LEARNER</u>			
Coordination	0.303	418.00*	1,962
Consideration	0.345	252.71*	2,961
Proficiency	0.349	171.45*	3,960

* = significant at $p = .001$

bottom quartile and personally inviting mean score was in the top quartile.

Results showed that 16.2% of the teachers were in the HH group and 17.6% were in the LL group. No teachers' mean scores fell in the HPRO-LPE or LPRO-HPE group.

In contrast, when the teachers were divided into the same four groups using the top third and bottom third as the cutoff for the high and low groups, there were 19 (25.7%) of the teachers in the HH group, 15 (20%) in the LL group, and one (1%) of the teachers in the HPRO-LPE, and none in the LPRO-HPE group. The professionally inviting score and personally inviting score on the ITS for the top quartile, median, bottom quartile, top third and bottom third are presented in Table 21.

Table 21

Personally (PE) and Professionally (PRO) Inviting Scores of Invitational Teaching Survey (ITS) for Top Quartile, Median, Bottom Quartile, Top Third, and Bottom Third

	Top Quartile	Median	Bottom Quartile	Top Third	Bottom Third
PE	95.65	87.65	81.75	91.67	83.33
PRO	97.34	91.15	83.15	94.93	85.78

Note. N = 74 teachers

The reasons that no teachers' scores were in the high-low or low-high groups are as follows: (1) there was not a broad range in scores and (2) scores on professionally inviting and scores on personally inviting were highly correlated ($r = .78$). See Table 22 for descriptive statistics on the total ITS score, professionally inviting score, and personally inviting score.

Differences between SAOM Scores

3e. Is there a significant difference in student affective outcomes (SAOM total scores) for teachers who vary on professionally and personally inviting

Table 22

Descriptive Statistics for ITS, Professionally Inviting Score (PRO), and Personally Inviting Score (PE)

Score	Number of Items	Mean	Standard Deviation	Median	Range
ITS	43	173.56	18.65	174.21	108-206
PRO	21	90.34	8.69	91.15	66-105
PE	22	87.18	11.05	87.65	43-105

Note: N = 74 teachers

practices?

An analysis of variance (*anova*) procedure was used to determine if the differences in mean scores on SAOM for three groups of teachers were significantly different. The three groups were as follows: (1) HH--teachers whose professionally and personally inviting mean scores were in the top third, (2) LL--teachers whose professionally and personally inviting mean scores were in the bottom third, and (3) MIDDLE--teachers whose professionally and personally inviting scores fell within the middle third. As shown in Table 23, the F value of 63.66 was significant at the .0001 level, and Duncan's multiple comparison procedure, which was used to examine differences between group means, indicated that there were significant differences between the SAOM mean scores of all groups. Twenty-eight teachers' mean scores on professionally and personally inviting practices were not in one of the three groups.

Table 23**Analysis of Variance and Duncan's Procedure****Analysis of Variance**

	Sum of Squares	Mean Square	DF	F Ratio
Within Groups	1924.354	962.177	2	
Between Groups	649.871	15.113	43	63.66
Total	2574.226		45	P = .0001

Mean Scores for Teacher Groups in Duncan's Procedure

Group	Mean	N
High-High	69.80	19
Middle	60.99	12
Low-Low	54.82	15

The *t* test was used to determine whether there was a significant difference in SAOM total scores between two groups of teachers: (1) teachers who were perceived by students to be professionally inviting but not personally inviting (HPRO-LPE) and (2) teachers who were perceived by students to be personally inviting but not professionally inviting (LPRO-HPE). The median score was used as the cutoff point for placing teachers in the high professionally and low personally inviting group and, vice versa, since no teachers' scores were in the

HPRO-LPE and LPRO-HPE groups when the top and bottom quartiles were used as cutoff points. Also, when the top and bottom thirds were used as cutoff points, only one teacher's score was in the HPRO-LPE group and none were in the LPRO-HPE group. Results indicated that there was no significant difference between the SAOM mean scores of the two groups ($t = 1.540$, $df = 8$, $p = .148$). The mean for the LPRO-HPE teachers ($M = 60.17$, $SD = 3.442$, $n = 9$) was slightly lower than the mean for the HPRO-LPE teachers ($M = 62.20$, $SD = 1.952$, $n = 9$).

Correlation between Professionally and Personally Inviting Practices

4. Is there a positive relationship between professionally inviting ITS score and personally inviting ITS score?

There was a strong positive relationship ($r = .78$) ($N=977$) between the professionally inviting score and the personally inviting score. Also, using the paired-comparisons t test, the difference between ITS score on professionally and ITS score on personally inviting practices was insignificant. For this analysis only, each score on professionally and personally inviting practices was converted to a standard score to account for the difference in the number of items comprising each score (22 items on personally inviting practices and 21 items on professionally inviting practices). It seems that if students perceive a teacher as being professionally inviting that they also perceive the teacher as being personally inviting. If students tend to score a teacher high on professionally inviting practices, they tend to score the teacher high on personally inviting practices, and vice versa.

Summary

The results of the present study were presented in seven sections. The first section described the sample of 74 teachers and their students. Included in the demographic data description for teachers was type of school,

location (by state), sex, years of teaching experience, years of clinical practice other than teaching, and educational background. Students were described by sex, age, ethnic background, year in college, amount of college prior to entering dental hygiene, formal dental assisting education, and dental assisting work experience. The second section of this chapter presented findings supporting the validity and reliability of the ITS and SAOM. In addition, reference was made to normative data on both instruments in the appendices. The third through the seventh sections reported the research findings.

The major questions in the study and the research answers were as follows:

1. Is there a positive relationship between inviting teacher practices and student affective outcomes? YES
2. Is there a positive relationship between professionally inviting and personally inviting teacher practices and student affective outcomes? YES
3. Are there differences, if any, between professionally inviting and personally inviting teacher practices in their relationships to student affective measures? YES
4. Is there a positive relationship between professionally inviting and personally inviting teacher practices? YES

Results indicated that there was a strong positive relationship ($r = .72$) between inviting teacher practices and student affective outcomes. Also, there was a strong positive relationship between professionally inviting and personally inviting practices and student affective outcomes.

The pattern of inviting teacher practices that seems to be important in predicting student affective outcomes includes both professionally and personally inviting dimensions. ITS subscore-*consideration* (personally inviting) and ITS subscore-*coordination* (professionally inviting) were the best predictors of SAOM with *consideration* as the single best predictor accounting for 47% of the variance in SAOM total score.

However, there were differences in inviting teacher practices for predicting student affective outcomes in particular subscores areas. The ITS subscore--*coordination*--which includes professionally inviting practices was the best predictor of student affective outcomes on feelings about the *course*. The ITS subscores--*coordination* and *proficiency*--which include professionally inviting practices were the best predictors of student affective outcomes on feelings about the *subject matter*. In comparison, the ITS subscores--*coordination* and *consideration*--which include both professionally and personally inviting practices were the best predictors of student affective outcomes on feelings about the *self-as-learner*. Items under *self-as-learner* include how students feel about their performance in the course and how much they feel that they have learned. ITS subscores--*consideration* and *coordination*--were the best predictors of perceptions about the *instructor*. Items under *instructor* include recommending the instructor to friends and feelings about liking the instructor as a person.

Students who rated teachers high on professionally inviting practices tended to rate teachers high on personally inviting practices. Therefore, students who perceived teachers as professionally inviting also perceived teachers as personally inviting. Teachers who were perceived by students to be high on both professionally and personally inviting practices tended to maximize student affective outcomes. In Chapter V a summary, conclusions, implications, recommendations for further research, and a discussion of the related literature is presented.

CHAPTER V

CONCLUSIONS

This chapter is organized into four parts: (1) summary, (2) conclusions, (3) implications, and (4) recommendations for further research. A discussion of the related literature is included.

Summary

The study investigated the relationship between inviting teacher practices and student affective outcomes within dental hygiene education. In particular, the research sought to determine the relationship, if any, between (1) inviting teacher practices and student affective outcomes, (2) professionally inviting and personally inviting teacher practices and student affective outcomes, (3) the differences, if any, between professionally and personally inviting teacher practices in their relationships to student affective outcomes, and (4) the relationship, if any, between professionally and personally inviting teacher practices.

Seventy-four dental hygiene teachers from 22 dental hygiene programs in Georgia, North Carolina, South Carolina, Virginia, and West Virginia volunteered to participate in the study. As a result, 1045 usable student answer sheets provided data for the study. Four to 33 students rated each teacher on inviting practices and their feelings about affective course outcomes.

Two instruments were used for data collection. The Invitational Teaching Survey (ITS) (Amos, Purkey, & Tobias, 1984) was used to measure inviting teacher practices. The ITS is a Likert-type instrument consisting of 43 items. Twenty-one of these items measure professionally inviting practices and 22

items measure personally inviting teacher practices. The professionally inviting items include three subscores: *coordination, proficiency, and expectation*; the personally inviting items include two subscores: *consideration* and *commitment*.

The second instrument, the Student Affective Outcome Measures (SAOM), was developed in this study. The SAOM is a Likert-type instrument also. It consists of 20 items which measure students' professed feelings about the course, the subject matter, the instructor, and the self-as-learner.

The data were analyzed using Pearson product-moment correlation, canonical correlation, multiple regression, *anova*, *t* test, Cronbach's alpha, and Spearman-Brown prophecy formula. Results of the analyses are summarized as follows:

1. The ITS is a reliable instrument for use in measuring professionally and personally inviting teacher practices. The split-half reliability coefficient was .96 which further supported the coefficient of .94 from the initial study during which the ITS was developed. In addition, Cronbach's alpha ($r = .95$) was similar to those reported by Smith (1985) and Ripley (1985), .93 and .94, respectively. Ripley (1985) used the Clinical Teaching Survey which is an adaptation of the ITS.

2. The SAOM is a reliable instrument to measure student affective outcomes. The split-half reliability coefficient was .92 and Cronbach's alpha was .91. Smith (1985) and Ripley (1985) supported the reliability with Cronbach's alphas of .93 and .90, respectively. Ripley changed the wording slightly to make the items appropriate for the clinical setting in nursing.

3. A strong positive relationship ($r = 0.72$) existed between the total score on the ITS and the total score on the SAOM. The research findings of Smith (1985) and Ripley (1985) who reported a strong positive relationship

between the ITS and SAOM with correlations of .73 and .69 support this finding. These results further substantiate the earlier research conclusions of Inglis (1976), Lambeth (1980), and Turner (1983) that inviting teachers are perceived as effective teachers.

4. A positive relationship ($r = 0.67$) existed between professionally inviting teacher practices and total SAOM score. Again this finding was supported by Smith (1985) and Ripley (1985) with correlations of .67 and .66.

5. A positive relationship ($r = .69$) existed between personally inviting teacher practices and total SAOM score. Smith's (1985) and Ripley's (1985) results supported the finding with strong positive relationships ($r = .70$ and .66).

6. Although two of five ITS subscores (*consideration*, and *coordination*) were valid predictors of total SAOM score and accounted for 52% of the variance, the single best predictor of SAOM was *consideration* (personally inviting) which accounted for 45% of the variance. The variance in SAOM increased seven percent when *coordination* was added. Smith's (1985) results support these findings. In her study two ITS subscores, *consideration* and *coordination*, accounted for 54% of the variance in SAOM with subscore *consideration*, accounting for 48% of the variance.

7. ITS subscores (*coordination* and *consideration*) were the two best predictors of SAOM subscore--*course*, accounting for 33% of the variance. Smith (1985) found that the same two subscores accounted for 39% of the variance.

8. ITS subscores (*consideration* and *commitment*) were the best predictors of SAOM subscore--*instructor*, accounting for 53% of the variance. In contrast Smith (1985) reported that subscores on *consideration* and *coordination* accounted for 57% of the variance.

9. ITS subscores (*coordination* and *proficiency*) were the best predictors of SAOM subscore--*subject matter*, accounting for 24% of the variance. Although Smith (1985) reported that *coordination* (accounting for 27% of the variance) also was the single best predictor of SAOM subscore--*subject matter*, she found that subscore--*commitment* when added to *coordination* was the best predictor accounting for 30% of the variance in SAOM.

10. ITS subscores (*coordination* and *consideration*) were the best predictors of SAOM subscore--*self-as-learner*, accounting for 35% of the variance. Smith (1985) supported these results by reporting that *consideration* (accounting for 32% of the variance) along with *coordination* were the best two predictors of SAOM subscore--*self-as-learner* accounting for 35% of the variance.

11. The conclusions stated in 7-10 indicated that ITS subscore on *consideration* (personally inviting) is the most important single variable to predict total SAOM score since it is included in the predictors for SAOM subscores---*course*, *instructor*, *self-as-learner* and the total SAOM score. The predictors of SAOM subscore on *subject matter* were the only predictors of SAOM subscores not found to include *consideration*.

12. Students have better attitudes toward the *course*, *subject matter*, *instructor*, and *self-as-learner* when they have teachers who score in the top third on both professionally and personally inviting practices as measured by the ITS. Smith's (1985) results also confirmed this finding.

13. A positive relationship (.78) existed between ITS professionally inviting subscore and ITS personally inviting subscore. The mean personally inviting subscore and mean professionally inviting subscore of dental hygiene teachers did not differ significantly in student ratings. It seems that when students perceived a teacher as using professionally inviting practices, they

also perceived a teacher as using personally inviting practices. If a teacher is perceived by students to be professionally inviting, the teacher is also perceived to be personally inviting. Smith's (1985) results supported this finding.

14. ITS subscore on *expectation* did not seem to be a significant predictor of SAOM or to be strongly related to SAOM in both this study and Smith's (1985) study. The fact that the subscore is one item may have influenced the statistical analysis. The content of the single item of expecting high academic performance of students is an important concept. Brophy and Good (1974) and Rosenthal and Jacobson (1968) have reported that teaching effectiveness is related to the expectations that teachers have for student performance. If several more items were added to the subscore, the results might have been different.

Conclusions

Within the limitations of this study, conclusions can be drawn regarding three major areas: (1) the reliability and validity evidence of the Invitational Teaching Survey (ITS) and the Student Affective Outcome Measures (SAOM), (2) the significance of inviting teacher practices in the teacher-student relationship and the classroom environment, and (3) the close relationship between professionally and personally inviting practices in attaining positive student outcomes. These conclusions are based on information reported in Chapters III and IV.

The high internal consistency of the ITS and SAOM (.95 and .91, respectively) supported the first conclusion. The second and third conclusions supported the importance of teachers striving to be professionally and personally inviting with students. The total ITS score and the subscores on

professionally and personally inviting practices were strongly related to SAOM (.72, .67, and .69, respectively). The correlation coefficients for ITS subscores to SAOM subscores ranged from .47 to .72.

The regression analysis indicated that there were slight differences in professionally and personally inviting practices in their relationships to student affective outcomes. It also showed that the ITS was a valid predictor of student affective outcomes as measured by the SAOM. The results of this study suggest that instructors can produce higher student affective outcomes within the educational experience by examining the content of the items of ITS subscores (*consideration, coordination, commitment, and proficiency*) and focusing on improving those inviting practices.

These conclusions on the importance and validity of inviting practices are supported by research in the broader literature not directly related to invitational education. Earlier studies (Aspy & Roebuck, 1972,1977; Bereson, 1971; Carkhuff, 1970; Guba & Getzels, 1955; Jenkins & Bausdell, 1975; McLaughlin & Erickson, 1981; O'Conner, Miller, MacKenzie, 1983) have also reported that the relationship between the student and the teacher is important to teacher effectiveness.

Mintzes (1979a) found two major dimensions in items for assessing teaching behaviors and evaluating courses: clarity (e.g., gives concrete examples) and rapport (e.g., praises students for good ideas). Cooper, Stewart, and Gudykunst (1982) reported that the relationship with the instructor was the best predictor of the instructor's evaluation accounting for 28 percent of the variance. Andersen (1978) found teacher nonverbal immediacy behavior (e.g., maintains closer physical distance, communicates on same spatial plane, touches, uses direct body orientation, is relaxed, gestures, smiles, uses eye contact, spends

time with the other interactant, vocally expressive) predicted 46% of the variance in student affect toward the instructor and nearly 20% of the variance in student affect toward the course content. McVetta (1981), however, found that interaction had little effect on student affect but that teacher competence and instructional method were the greatest predictors of student affect. In the present study ITS subscore--*consideration* accounted for 45% of the variance in total SAOM score. When ITS subscore--*coordination* was added to *consideration*, 52% of the variance was predicted. Results of studies in the literature, along with the results of the present study as described in Chapter IV, emphasized the importance of establishing and maintaining good relationships with students.

Doyle and Whitely (1974) found similar results in their study using student ratings as criteria for effective teaching. The relationships among ratings on students' liking for the instructor as a person, how much students learned, how much students like the subject, overall rating of teacher effectiveness, and rating of overall course effectiveness showed correlations between .17 to .52 as compared to between .38 to .61 for the present study. Table 24 presents the complete comparison. In addition, the relationship between teacher attitudes towards students related moderately ($r = .55$) to students' liking for the teacher as a person as in the present study ($r = .51$). In contrast the relationship between the overall rating of the teacher and teacher attitudes towards students was low ($r = .14$), whereas in the present study the relationship was strong ($r = .64$).

Table 24

**Comparison among Relationships of Affective Outcomes
between Present Study and Doyle and Whitely (1974)**

Item	1	2	3	4	5
1 Liking for Teacher as Person	1.0	.27(.29)	.05+(.28)	.42(.45)	.17*(.41)
2 How much Learned		1.0	.38(.61)	.52(.37)	.41(.43)
3 Liking for Subject			1.0	.42(.39)	.48(.45)
4 Overall Teacher Effectiveness				1.0	.41(.42)
5 Overall Course Effectiveness					1.0

Note. () = present study
 significant at $p = .001$; * $p = .05$; + = not significant
 Kendall's tau-b coefficients were used in this study.

Suchner (1985) reported moderate to strong correlations ($r = .57$ to $.79$) between teacher practices and overall evaluations of the instructor and the course as compared to correlations ranging between $.38$ and $.62$ for the present study. He found a stronger correlation between the usefulness of the course and overall ratings of the instructor ($r = .72$) and the usefulness of the course and overall ratings of the course ($r = .65$) as compared to $.34$ and $.44$, respectively, for the present study. Also, the relationship between interest in the subject and the overall instructor ratings ($r = .59$) and between course and overall instructor rating ($r = .66$) ratings were slightly lower in the present study, $.39$ and $.45$, respectively.

In addition, Brady (1985) reported that students like positive professors better than negative professors, and students saw positive professors as more effective than negative professors. The results of the present study supported these findings. He also reported that students saw demanding professors as more effective than easy professors, whereas in the present study there was little correlation ($r = .12$) between teacher expectations and affective outcomes. Read (1979) reported that how students perceive the overall teaching performance is strongly backed up with students' feelings about the course. In this study inviting teacher practices related moderately ($r = .58$) to how students felt about the *course*. Hocking (1976) found that changes in students' interest was a determinant of changes in ratings of instructors as was found in the present study with a moderate positive correlation ($r = .58$) between total score on ITS and total score on SAOM subscore--*subject matter*.

Marsh and Overall (1980) generally supported the finding of a positive relationship between teacher practices and affective criteria of feeling competent in the subject and wanting to take more coursework in the subject. Two exceptions were in teacher practices related to Enthusiasm/Concern ($r = .16$ as related to competence) and Organization ($r = .10$ as related to more coursework). Similarly, Haslett (1976) reported that students' academic self-concept significantly correlated with attitudes toward teachers and judgments of teacher effectiveness. This finding was supported by Mintzes (1979b) who showed a consistent relationship between how students perceived their performance and their assessment of the teachers' effectiveness. In the present study, how students saw themselves as learners related moderately ($r = .59$) to total ITS score on inviting practices. Haslett (1976) found that for high school students interpersonal effectiveness was the most significant overall predictor

of student attitudes towards teachers. In contrast, for college students academic skills was the major predictor variable of attitudes towards teachers.

Implications

There are three implications drawn from the present study. The most important implication relates to the theory of invitational teaching as proposed by Purkey (1978) and Purkey and Novak (1984). The second relates to improving teacher effectiveness. The third relates to the general application of invitational theory.

Theory of Invitational Teaching

The major implication of this study lies in the theory of invitational teaching. Invitational theory purports that people have untapped potential, and this potential develops best when people are treated as able, valuable, and responsible and when they are located in a humane environment that intentionally invites people (Purkey & Schmidt, 1984). The results support this theory by demonstrating that as students' perceive their teachers' behavior as more professionally and personally inviting, their attitude toward the educational experience improves.

In addition, invitational theory supports the thesis that both professionally and personally inviting practices are important areas of functioning for the inviting teacher and that a balance is needed between the two (Purkey & Novak, 1984). Results show that both areas are essential to attaining the highest affective outcomes for students. It seems that teachers need to closely study the personally inviting practices measured by items under ITS subscores on *consideration* and *commitment* if they desire to have positive student affective outcomes, in particular related to student perceptions of

them as measured by SAOM subscore--*instructor*. Teachers can make a difference in students' attitudes toward their educational experiences.

Improvement in Teacher Effectiveness

The second implication of this study centers around the value of the ITS and SAOM for teacher feedback and improved teacher effectiveness in dental hygiene education and other educational settings. Since the ITS measures both professionally inviting and personally inviting teacher practices, teachers can use the instrument to determine to what degree and in what areas they are creating and maintaining an inviting relationship with their students. The ITS subscores of *consideration, commitment, coordination, proficiency, and expectation* provide a method of analyzing teacher behaviors to identify evidence of professionally and personally inviting behaviors. Moreover, the clusters within each subscore provide closer delineation of inviting practices. The same is true for SAOM subscores--*course, subject matter, instructor, self-as-learner*.

Feedback from students about professionally and personally inviting teacher practices provides an opportunity and challenge for teachers. From this feedback teachers can determine what areas of professionally and personally inviting practices need improvement. Since teachers who scored high on both professionally and personally inviting practices, as perceived by students, also scored high on student affective outcomes, it is important to improve both personally and professionally inviting practices.

A criticism of teacher evaluation has been the lack of evaluation of outcomes (Scheck, 1978). The SAOM is a valuable tool for teachers to learn about how students feel about the *course, the subject matter, the instructor, and the self-as-learner*. This study supports the theory that the ways a teacher behaves has an impact on students' perceptions of the educational experience.

The ITS and SAOM, used periodically, might provide teachers with valuable information to help them improve their personally inviting and professionally inviting practices and to be more aware of students' feelings.

In-service courses and continuing education programs for teachers which focus on Invitational Theory using the ITS and SAOM may help dental hygiene teachers, dentist educators, and nursing instructors to be more inviting with students and, subsequently, lead to better student attitudes toward the learning experience. Likewise the instruments can be used in a unit of study on inviting teacher practices and student affective outcomes for programs training dental auxiliary educators and for programs training secondary or college teachers.

A key element in invitational theory is intentionality. The ITS provides a method of increasing the stance of being intentionally inviting with students. The instrument can be used over time with one group of students and with different groups of students to provide feedback to teachers. This feedback will increase the chances that teachers will be able to attain intentionality in their personally and professionally inviting behaviors.

General Application of Invitational Theory

A third implication in this study relates to the general application of invitational theory to settings other than educational institutions. If dental hygiene teachers model professionally inviting and personally inviting practices, students may model the same behaviors during their years in school and after graduation. Inviting behaviors included on the ITS are appropriate for success in a variety of settings including practice in a dental office, practice as a public health dental hygienist, dental sales representative, coordinator of geriatric dental program, and practice in a hospital. Personally

inviting behaviors enhance communication with dental patients, office staff, and community groups, for example, when the person (or teacher) shows sensitivity to needs of people, helps people with special problems, is polite to people, is friendly to people, appears to enjoy life, is easy to talk with, respects people, and involves people in decision-making. Professionally inviting behaviors that lead to success are, for example, when the person (or teacher) is on time for appointments, uses time efficiently, demonstrates up-to-date knowledge of the profession, answers questions clearly, is prepared, is organized, and uses a variety of methods to help people learn.

Recommendations for Further Study

Teacher performance and teacher effectiveness have been and continue to be important areas of research. In contrast the concept of invitational teaching is relatively new with few specifically related research studies. This study has supported these few research findings (Inglis, 1976; Lambeth, 1980; Ripley, 1985; Turner, 1983; Smith, 1985) in invitational teaching which indicated a strong positive relationship between inviting teacher practices and various student outcomes. Based on the results of this study, research based on invitational teaching and student outcomes should be continued.

From this study several promising areas of research have emerged. Since many questions remain unanswered, the following recommendations are viewed as worthwhile areas for future research:

1. To replicate this study with samples from other college populations and from secondary populations. Such studies may lend further support to the findings of this study and generalize the theory of invitational teaching to other educational settings.

2. To study the relationship between inviting teacher practices and school achievement as measured by final course grade, project grades, performance on board examinations, and test grades. This research could concentrate on cognitive student outcomes rather than on affective student outcomes.

3. To study the differences, if any, between student perceptions of inviting teacher practices and teachers' perceptions of the same inviting practices. Teachers would self-report their perceptions of their inviting practices.

4. To study the differences, if any, between student perceptions of inviting teacher practices and a trained observer's perceptions of inviting teacher practices.

5. To adapt the Invitational Teaching Survey (ITS) to measure professionally and personally inviting teacher practices in the clinical setting in dental hygiene education.

6. To adapt the Student Affective Outcomes (SAOM) to assess affective outcomes in the clinical setting in dental hygiene education.

7. To conduct a factor analysis to verify and revise the subscores on the ITS. The analysis may help to eliminate some items so that a shorter version of the ITS could be developed which would not take as long to administer. Therefore, its use would be more widely accepted. Also, the analysis may clarify the professionally and personally inviting dimensions represented by the subscores.

8. To validate further the ITS and SAOM by having students, faculty, administrators, and/or experts in invitational teaching evaluate each item on the ITS as to its importance in teaching effectiveness and evaluate each item on the SAOM as to its importance as an affective outcome.

9. To develop concurrent validity of the ITS by examining the relationship between student perceptions of inviting teacher practices as measured by the ITS and student perceptions of teacher practices as measured by other instruments such as Student Opinion Survey (SOR) (Doyle, 1972), the Flanders Interaction Analysis Categories (FIAC) (Flanders, 1960, 1970), the Index of Teacher's Affective Communication (ITAC) (McLaughlin, Erickson, & Ellison, 1980), the Interaction Scale (Barker, p. 27, 1982), Illinois Course Evaluation Questionnaire (Aleamoni & Spencer, 1973), Student Instructional Report (SIR), (Centra, 1979), the immediacy (BII) scale (Andersen, 1978), Teacher Behaviors Inventory (TBI) (Murray, 1983), and/or Instructional Development and Effectiveness Assessment System (IDEA) from Kansas State University (Centra, 1979).

10. To study, using an experimental design, significant differences between cognitive and affective outcomes of students of teachers who are skilled in the Invitational Teaching Model and teachers who are unaware and untrained in the model.

11. To study relationships among inviting teacher practices and student affective outcomes according to teacher demographic variables (e.g. sex, race, years of teaching experience, educational background, years of clinical practice).

12. To study relationships among inviting teacher practices and student affective outcomes according to student demographic variables (e.g. sex, race, age, year in school, educational background, work experience).

13. To identify variables other than teaching behaviors which influence students' attitudes, values, and beliefs about the teaching-learning environment. For example, the effects individual student differences, peers,

and physical environment may have an impact on students' perceptions of the school environment and the student-teacher relationship.

14. To determine the relationship between student perceptions of inviting teacher practices and students' perception of their self-concept.

15. To study the differences in inviting practices at the beginning, midway, and at the end of a course, and to measure the differences in student affective outcomes midway and at the end of the course when teachers are provided feedback through a consultant. The teacher would discuss the evaluations and ways to improve personally and professionally teaching practices with the consultant.

Invitational teaching provides a new way of approaching the teaching-learning process with the ITS and SAOM as reliable instruments to help teachers develop and maintain inviting practices. Personally and professionally inviting teacher practices related strongly to students' perceptions about the educational experience. Therefore, the best investment that can be made into the future of dental hygiene and into the future of education in general is helping teachers to become the best teachers possible.

The present study supported the belief that teachers not only need to be competent in their content area to help students learn and appreciate course content, but also that teachers need to develop positive personal relations with students. They need to behave in ways that help students feel that they are able, valuable, and responsible. The poet Kahil Gibran (1929) expressed the importance of personal relations when he said, "the teacher who walks in the shadow of the temple, among his followers, gives not of his wisdom, but rather of his faith and his lovingness (p. 64)."

Bibliography

- Aleamoni, L.M. (1978). Development and factorial validation of the Arizona course/instructor questionnaire. Educational and Psychological Measurement, 38, 1063-1067.
- Aleamoni, L.M. (1978). The usefulness of student evaluations in improving college teaching. Instructional Science, 7, 95-105.
- Aleamoni, L.M. (1981). Student ratings of instruction. In J. Millman (Ed.), Handbook of teacher evaluation. Beverly Hills, CA: Sage Publications.
- Aleamoni, L.M. & Spencer, R.E. (1973). The Illinois course evaluation questionnaire: A description of its development and a report of some of its results. Educational and Psychological Measurement, 33, 669-684.
- Amidon, E.J., & Flanders, N.A. (1963). The role of the teacher in the classroom. Minneapolis: Amidon & Associates.
- Amos, L.W., Purkey, W.W., & Tobias, N. (1984). Invitational Teaching Survey. Unpublished instrument. University of North Carolina at Greensboro, Greensboro, NC.
- Andersen, J.F. (1978). The relationship between teacher immediacy and teaching effectiveness. Unpublished doctoral dissertation, West Virginia University, Morgantown, WVA.
- Anderson, L.W. (1981). Assessing affective characteristics in the schools. Boston: Allyn & Bacon, Inc.
- Aspy, D.N., & Roebuck, F.N. (1972). An investigation of the relationship between student levels of cognitive functioning and the teacher's classroom behavior. Journal of Educational Research, 65, 365-368.
- Aspy, D.N., & Roebuck, F.N. (1977). Kids don't learn from people they don't like. Amherst, MA: Human Resource Development Press.
- Barker, L.L. (Ed.). (1982). Communication in the classroom. Englewood Cliffs, NJ: Prentice-Hall.
- Berenson, D. (1971). The effects of systematic human relations training upon the classroom performance of elementary school student teachers. Journal of Research and Development in Education, 4, 70-85.
- Berk, R.A. (1979). The construction of rating instruments for faculty evaluation. Journal of Higher Education, 50, 650-669.
- Biddle, B.J. (1964). The integration of teacher effectiveness research. In B.J. Biddle & W.G. Ellena (Eds.), Contemporary research on teacher effectiveness. New York: Holt, Rinehart, & Winston.

- Bloom, B.S. (1972). Taxonomy of educational objectives. New York: David McKay.
- Bloom, B.S. (1976). Human characteristics and school learning. New York: McGraw Hill.
- Bochner, A.P. & Kelly, C.W. (1974). Interpersonal competence: Rationale, philosophy, and implementation of a conceptual framework. Speech Teacher, 23, 279-301.
- Bolton, D.L. (1973). Selection and evaluation of teachers. Berkeley, CA: McCutchan.
- Borich, G.D. & Madden, S.K. (1977). Evaluating classroom instruction: a source-book of instruments. Reading, MA: Addison-Wesley.
- Brady, P.J. (1985, April). Students' public and private evaluations of the likeability and effectiveness of professors. Paper presented at the meeting of the American Educational Research Association Annual Meeting, Chicago.
- Braskamp, L.A., Caulley, D., & Costin, F. (1979). Student ratings and instructor self-ratings and their relationship to student achievement. American Educational Research Journal, 16, 295-306.
- Brophy, J.E. & Good, T.L. (1974). Teacher-student relationship: Causes and consequences. New York: Holt, Rinehart, & Winston.
- Byrne, D. (1961). Interpersonal attraction and attitude similarity. Journal of Abnormal and Social Psychology, 62, 713-715.
- Campbell, J.R. (1972). In touch with students: A philosophy for teachers. Columbia, Missouri: Kelly Press, Inc.
- Carkhuff, R.R. (1970). The development of human resources. New York: Holt, Rinehart, & Winston.
- Centra, J.A. (1977). Student ratings of instruction and their relationship to student learning. American Educational Research Journal, 14, 17-24.
- Centra, J. (1979). Determining faculty effectiveness: Assessing teaching, research, and service for personnel decisions and improvement. San Francisco: Jossey-Bass.
- Chambers, D.W. (1977). Faculty evaluation: Review of the literature most pertinent to dental education. Journal of Dental Education, 41(6), 290-300.
- Combs, A.W. (1982). A personal approach to teaching: Beliefs that make a difference. Boston: Allyn & Bacon.
- Combs, A.W. & Avila, D.L. (1985). Helping relationships: Basic concepts for the helping professions. Newton, MA: Allyn and Bacon.

- Combs, A.W., Richards, A., & Richards, F. (1976). Perceptual Psychology: A Humanistic Approach to the Study of Persons. New York: Harper & Row.
- Cooper, P.J., Stewart, L.P., & Gudykunst, W.B. (1982). Relationship with instructor and other variables influencing student evaluation of instruction. Communication Quarterly, 30, 308-15.
- Costin, F. (1978). Do student ratings of college teachers predict student achievement? Teaching of Psychology, 5, 86-88.
- Costin, F., Greenough, W.T., & Menges, R.J. (1971). Student ratings of college teaching: Reliability, validity, and usefulness. Review of Educational Research, 41, 511-535.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.
- Darling-Hammond, L., Wise, A.E., & Pease, S.R. (1983). Teacher evaluation in the organizational context: A review of the literature. Review of Educational Research, 53, 285-328.
- Derry, J.O. (1979). Can students' ratings of instruction serve rival purposes? Journal of Higher Education, 50, 79-88.
- Dewey, J. (1933). How we think: A restatement of the relation of reflective thinking to the educative process. New York: D.C. Heath.
- Dixon, J.K. & Koerner, B. (1976). Faculty and student perceptions of effective classroom teaching in nursing. Nursing Research, 25, 300-305.
- Doyle, K.O., Jr. (1972). Construction and evaluation of scales for rating college instructors. A thesis submitted to the faculty of the graduate school of the University of Minnesota at Minneapolis.
- Doyle, K.O., Jr. (1975). Student evaluation of instruction. Lexington, MA: Lexington Books.
- Doyle, K.O. (1983). Evaluating teaching. Lexington, MA: D.C. Heath & Co.
- Doyle, K.O., & Crichton, L.I. (1978). Student, peer, and self evaluations of college instructors. Journal of Educational Psychology, 79, 815-826.
- Doyle, K.O., Jr., & Whiteley, S.E. (1974). Student ratings as criteria for effective teaching. American Educational Research Journal, 11, 259-74.
- Dunkin, M.J., & Biddle, B.J. (1974). The study of teaching. New York: Holt, Rinehart & Winston.
- Feldman, K. (1976). Grades and college students' evaluations of their courses and teachers. Research in Higher Education, 4, 69-111

- Feletti, G.I., & Sanson-Fisher, R.W. (1983). Measuring tutor ratings in relation to curriculum implementation. Higher Education, 12, 145-54.
- Fishbein, M. (1966). The relationship between beliefs, attitudes, and behavior. In S. Feldman (Ed.). Cognitive consistency, motivational antecedents, and behavioral consequences, New York: Academic Press.
- Flanders, N.A. (1960). Interaction analysis on the classroom: a manual for observers. Minneapolis: College of Education, University of Minnesota.
- Flanders, N.A. (1970). Analyzing teacher behavior. Reading, MA: Addison-Wesley.
- Frey, P.W. (1973). Student ratings of teaching: validity of several rating factors. Science, 182, 83-85.
- Gage, N.L. (1978). The scientific basis of the art of teaching. New York: Teachers College Press.
- Gibran, K. (1923). The prophet. New York: Alfred A. Knopf.
- Glasser, W. (1969). Schools without failure. New York: Harper & Row.
- Good, T., Biddle, B., & Brophy, J. (1975). Teachers make a difference. New York: Holt, Rinehart & Winston.
- Goral, V. & Clark, M.A. (1980). Affective considerations for an effective dental hygiene curriculum. Dental Hygiene, 15, 19-24.
- Greenough, W.T., & Menges, R.J. (1971). Student ratings of college teaching: Reliability, validity, and usefulness. Review of Educational Research, 41, 511-535.
- Grush, J.E., & Costin, F. (1975). The student as consumer of the teaching process. American Educational Research Journal, 12, 55-66.
- Guba, E.G. & Getzels, J.W. (1955). Personality and teacher effectiveness: A problem in theoretical research. Journal of Educational Psychology, 46, p.355.
- Gurney, D. (1977). College students' perceptions of effective teaching: Process over product. Orlando: Florida Technological University Secondary Education, (ERIC Document Reproduction Service No. ED 229 340)
- Hair, J.F., Anderson, R.E., Tatham, R.L., & Grablovsky, B.J. (1979). Multi-variate Data Analysis with Readings. Tulsa, OK: Petroleum Publishing.
- Hansen, B. (1976). Teacher evaluation is immoral. Community College Review, pp. 4-7.
- Hansen, J.M. (1981). School effectiveness-teacher effectiveness. High School Journal, 64, 222-226.

- Haslett, B.J. (1976). Attitudes towards teachers as a function of student academic self-concept. Research in Higher Education, 4, 41-58.
- Hildebrand, M. (1973). The character and skills of the effective professor. Journal of Higher Education, 44, 41-50.
- Hocking, J.M. (1976). College students' evaluations of faculty are directly related to course interest and grade expectation. College Student Journal, 10, 312-316.
- Holland, J.C., & Vann, W.F. (1983). The use of affective assessment to plan and evaluate instructional changes. Journal of Dental Education, 47, 761-766.
- Inglis, S.C. (1976). The development and validation of an instrument to assess teacher invitations and teacher effectiveness as reported by students in a technical and general post-secondary educational setting. Unpublished doctoral dissertation, University of Florida, Gainesville, Florida.
- Jacobson, D.R. (1982). Instructional development report. Outstanding teachers: How do undergraduate students describe them. Grand Forks: University of North Dakota. (ERIC Document Reproduction Service No. ED 224 427)
- Jenkins, J.R., & Bausdell, R.B. (1975). How teachers view the effective teacher: Student learning is not the top criterion. Phi Delta Kappan, 55, 572-73.
- Johnson, D.W. (1974). Affective outcomes. In H.J. Walberg (Ed.), Evaluating educational performances: A sourcebook of methods, instruments, and examples. Berkley, CA: McCutchan.
- Krathwohl, D.R., Bloom, B.S., & Masia, B.B. (1964). Taxonomy of educational objectives: affective domain. New York: David McKay.
- Lambeth, C.R. (1980). Teacher invitations and effectiveness as reported by secondary students in Virginia. Unpublished doctoral dissertation, University of Virginia at Charlottesville.
- Levine, M.S. (1977). Canonical analysis and factor comparison. Beverly Hills, CA: Sage.
- Mackenzie, R.S. (1981). The role of curriculum and faculty evaluation in dental education. Journal of Dental Education, 45, 678-682.
- Macklup, F. (1979, October). Poor learning from good teachers. Academe, pp. 376-380.
- Mager, R.F. (1968). Developing attitude toward learning. Belmont, CA: Fearon--Pitman Publishers.

- Marsh, H.W. (1977). The validity of students' evaluations of instructors independently nominated as best and worst teachers by graduating seniors. American Educational Research Journal, 14, 441-447.
- Marsh, H.W. (1984). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases, and utility. Journal of Educational Psychology, 76, 707-754.
- Marsh, H.W., Fleiner, H., & Thomas, C.S. (1975). Validity and usefulness of student evaluations of instructional quality. Journal of Educational Psychology, 67, 833-39.
- Marsh, H.W., & Overall, J.U. (1979). Long-term stability of students' evaluations: A note on Feldman's consistency and variability among college students in rating their teachers and courses. Research in Higher Education, 10, 139-147.
- Marsh, H.W., & Overall, J.U. (1980). Validity of students' evaluations of teaching effectiveness: Cognitive and affective criteria. Journal of Educational Psychology, 72, 468-75.
- Marsh, H.W., & Overall, J.U. (1981). The relative influence of course level, course type and instructor on students' evaluations of college teaching. American Educational Research Journal, 18, 103-112.
- Marsh, H.W., Overall, J.U., & Kesler, S.P. (1979). Validity of student evaluations of instructional effectiveness: A comparison of faculty self-evaluation and evaluations by their students. Journal of Educational Psychology, 71, 149-160.
- Maslow, A.H. (1968). Toward a psychology of being (2nd ed.). New York: Van Nostrand Reinhold.
- McGreal, T.L. (1983). Successful teacher evaluation. Alexandria, VA: Association for Supervision and Curriculum Development.
- McKeachie, W.J. (1969). Student ratings of faculty. American Association of University Professors Bulletin, 55, 439-444.
- McKeachie, W.J. (1979). Student ratings of faculty: A reprise. Academe, 62, 384-397.
- McKeachie, W.J., Lin, Y.G., & Mann, W. (1971). Student ratings of teacher effectiveness: Validity studies. American Educational Research Journal, 8, 435-445.
- McKeachie, W.J., Lin, Y., Milholland, J.E., & Isaacson, R.L. (1966). Student affiliation motives, teacher warmth, and academic achievement. Journal of Personality and Social Psychology, 4, 457-461.
- McLaughlin, M.L., & Erickson, K.V. (1981). A multidimensional scaling analysis of the "ideal interpersonal communication instructor." Communication Education, 30, 393-398.

- McLaughlin, M.L., Erickson, K.V., & Ellison, M.A. (1980). A scale for the measurement of teachers' affective communication. Communication Education, 29, 21-32.
- McNeil, J.D., & Popham, W.J. (1973). The assessment of teacher competence.- In R.M.W. Travers (Ed.), Second handbook of research on teaching. Chicago: Rand McNally.
- McVetta, R. (1981, April). Factors contributing to student affect, satisfaction, and behavioral intention: Research extension at the community college. Paper presented at Eastern Communication Association Convention, Pittsburgh, PA.
- Medley, D.M. (1982). Teacher effectiveness. In H. E. Mitzel (Ed.), Encyclopedia of Educational Research, 4, (pp. 1894-1903). New York: Free Press.
- Millman, J. (1981). Introduction. In J. Millman (Ed.), Handbook of teacher evaluation (pp. 12-13). Beverly Hills, CA: Sage Publications.
- Mintzes, J.J. (1979a). Overt teaching behaviors and student ratings of instructors. Journal of Experimental Education, 48, 145-153.
- Mintzes, J.J. (1979b) Academic self-concept and student ratings of instructors.- College Student Journal, 13, 167-174.
- Murray, H.G. (1983). Low-inference classroom teaching behaviors and student ratings of college teaching effectiveness. Journal of Educational Psychology, 75, 138-49.
- Novak, J.M. (1978). Invitations to what: Considerations for the development of teachers. Paper presented at the American Educational Research Association Annual Meeting, Toronto, Ontario Canada.
- Novak, J.M. (1979). Becoming an invitational teacher. Paper presented at meeting of Third Annual National Conference of the Educational Leadership Council of America, Washington, D.C.
- Novak, J.M. (1983). Revisoning invitational education. Paper presented at the American Educational Research Association, Montreal, Quebec Canada.
- Novak, J.M. (1984). Inviting research: Paradigms and projects for a theory of educational practice. Paper presented at the American Educational Research Association, New Orleans.
- O'Connor, P., Miller, D.M., & Mackenzie R.S. (1983). Manual to accompany the videotapes for the project: Mediated instruction in one-on-one teaching for faculty in clinical dentistry. Ann Arbor: University of Michigan.

- Overall, J.U., & Marsh, H.W. (1978, March). Cognitive and affective outcomes: - their relationship to effective teaching and students' evaluations of instruction. Paper presented at the meeting of the Annual Meeting of the American Educational Research Association, Toronto Ontario, Canada.
- Overall, J.U., & Marsh, H.W. (1982, December). Students' evaluations of teaching: an update. AAHE Bulletin, pp. 9-11.
- Pascarella, E.T. Student-faculty informal contact and college outcomes. Review of Educational Research, 50, 545-595.
- Patalano, F. (1978). School psychology graduate students' perceptions of effective and ineffective teachers. College Student Journal, 12, 360-363.
- Perkins, D., & Abbot, R. (1982). Validity of student ratings for two affective outcomes of introductory psychology. Educational and Psychological Measurement. 42, 317-323.
- Proceedings of the 51st annual session, American Association of Dental Schools. (1974). Journal of Dental Education, 38, 317.
- Purkey, W.W. (1970). Self-concept and school achievement. Englewood Cliffs, N.J.: Prentice-Hall.
- Purkey, W.W. (1978). Inviting school success: A self-concept approach to teaching and learning. Belmont, CA: Wadsworth.
- Purkey, W.W., Cage, B.N., & Graves, W. (1973). The Florida Key: A scale to infer learner self-concept. Educational and Psychological Measurement, 33, 979-984.
- Purkey, W.W. & Novak, J.M. (1984). Inviting school success: A self-concept approach to teaching and learning (2nd ed.). Belmont, CA: Wadsworth.
- Purkey, W.W., & Schmidt, J.J. (in press). The inviting relationship: An expanded perspective for professional counseling. Englewood Cliffs, NJ: Prentice-Hall.
- Rasmussen, R.H. & Uchello, E. (1978). An evaluation system for dental auxiliary faculty. Educational Directions, 3(1), 8-12.
- Raths, J. (1982). Evaluation of teachers. In H.E. Mitzel (Ed.), Encyclopedia of Educational Research, 2, (pp.611-616). New York: Free Press.
- Ray, A.A. (Ed.). (1982a). SAS user's guide: Basics. Cary, NC: SAS Institute Inc.
- Ray, A.A. (Ed.). (1982b). SAS user's guide: Statistics. Cary, NC: SAS Institute, Inc.
- Read, R.R. (1979). Components of student-faculty evaluation data. Educational and Psychological Measurement, 39, 353-360.

- Research should focus on improving teaching, educators advise. (1985, June 12). Education Week, p. 11.
- Ripley, D.M. (1985). Invitational teaching behaviors in the associate degree clinical setting. Unpublished master's thesis, University of North Carolina at Greensboro.
- Rodin, M., & Rodin, B. (1972). Student evaluations of teachers. Science, 177, 1164-1166.
- Rogers, C. (1961). On becoming a person. Boston: Houghton Mifflin.
- Rogers, C.R. (1969). Freedom to learn. Columbus: Charles E. Merrill.
- Rogers, C.R. (1980). A way of being. Boston: Houghton Mifflin.
- Rosenthal, R. & Jacobson, L. (1968). Pygmalion in the classroom. New York: Holt, Rinehart, & Winston.
- Russell, D., Purkey, W., & Siegel, B. (1982). The artfully inviting teacher: A hierarchy of strategies. Education, 103, 35-38.
- Saadeh, I.Q. (1970). Teacher effectiveness or classroom efficiency: A new direction in the evaluation of teaching. The Journal of Teacher Education, 21, 73-91.
- Scheck, D.D. (1978). The use and abuse of student evaluations of teaching effectiveness in higher education. College Student Journal, 12, 1-13.
- Schmidt, J.J. (1981). On encouraging intentionality: A less than fluent response. Invitational Education Newsletter, 2, 3-4.
- Schmidt, J.J. (1982). Coordination and supervision of counseling services: An invitational approach. Counselor Education and supervision, 22, 98-106.
- Scott, L.S., Mayberry, W.E., Lefcoe, D., & Harrington, M.S. (1985). The inquiry approach in dental hygiene education. Journal of Dental Education, 49, 286-293.
- Scott, M.D., & Wheelless, L.R. (1977). Communication apprehension, student attitudes, and levels of satisfaction. Western Journal of Speech Communication, 41, 188-198.
- Sihota, S.S., & Singhania, R.P. (1981). On teaching effectiveness. Journal of Business Education, 57, 53-56.
- Skaff, K. O. (1975). The humanization of dental hygiene education. Dental Hygiene, 49, 466-468.
- Smith, C. (1985). The effect of inviting teaching practices on affective outcomes of graduate nursing students: an extension and replication. Unpublished master's thesis, University of North Carolina at Greensboro.

- SPSS-X, Inc. (1983). SPSS-X user's guide. New York: McGraw Hill.
- Stanford, G. & Roark, A.E. (1974). Human interaction in education. Boston: Allyn & Bacon.
- Stillion, J.M. & Siegel, B.L. (1985). The intentionally inviting hierarchy. Journal of Humanistic Education, 9, 33-39.
- Suchner, R.W. (1985, April). Evaluating college courses: a causal analysis of factors linking instructors' activities and students' evaluations. Paper presented at the meeting of the American Educational Research Association Annual Meeting, Chicago.
- Sullivan, A., & Skanes, G. (1974). Validity of student evaluation of teaching and the characteristics of successful instructors. Journal of Educational Psychology, 66, 584-590.
- Tarkowski, M.R. (1984). Performance evaluation of faculty and administrators in dental hygiene programs. Educational Directions, 9, 10-15.
- Thorndike (1982), Applied psychometrics. Boston: Houghton Mifflin.
- Traux, C.B. & Carkhuff. (1967). Toward effective counseling and psychotherapy. - Chicago: Aldine.
- Trentham, L. & Halpin, G. (1979). Effects of individual undergraduate instruction on cognition and attitudes. Improving College and University Teaching, 27, 126-129.
- Tuckman, B.S. (1976). Feedback and the change process. Phi Delta Kappan, 57, 341-344.
- Turner, R.B. (1983). Teacher invitations and effectiveness as reported by physical education students. Unpublished doctoral dissertation, University of North Carolina at Greensboro.
- Vargas, J.S. (1977). Behavioral psychology for teachers. New York: Harper & Row.
- Weber, L.J., & Hunt, T.C. (1977). A comparison of cognitive and attitudinal outcomes of two methods of learning. Improving College and University Teaching, 25, 51-52.
- Wong, S. (1978). Nurse-teacher behaviours in the clinical field: Apparent effect on nursing students' learning. Journal of Advance Nursing, 3, 369-372.
- Wotruba, T.R., & Wright, P.L. (1975). How to develop a teacher rating instrument: A research approach. Journal of Higher Education, 46, 653-663.

APPENDIX A

Final 43-item ITS instrument

PLEASE DO NOT MARK ON THE SURVEY**INVITATIONAL TEACHING SURVEY(ITS)****by Amos, Purkey, & Tobias, 1984**

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your **INDIVIDUAL** experiences with this instructor. Mark only one response per item.

A - Very Seldom (or Never)--VS/N
B - Seldom--S
C - Occasionally--OCC
D - Often--OFT
E - Very Often (or Always)--VO/A

The Instructor:

	VS/N	S	OCC	OFT	VO/A
1. Expresses pleasure with the class.	A	B	C	D	E
2. Shows a lack of respect for students.	A	B	C	D	E
3. Chooses inappropriate readings for the course.	A	B	C	D	E
4. Makes a special effort to learn students' names.	A	B	C	D	E
5. Is unprepared for class.	A	B	C	D	E
6. Demonstrates a lack of enthusiasm about the course.	A	B	C	D	E
7. Explains grading procedures adequately.	A	B	C	D	E
8. Shares out-of-class experiences.	A	B	C	D	E
9. Comes to class late.	A	B	C	D	E
10. Uses a variety of methods to help students learn.	A	B	C	D	E
11. Answers questions clearly.	A	B	C	D	E
12. Is slow in evaluating students' work.	A	B	C	D	E
13. Has difficulty in facilitating class discussion.	A	B	C	D	E
14. Uses tests to evaluate course objectives.	A	B	C	D	E
15. Involves students in decision-making processes.	A	B	C	D	E
16. Demonstrates an up-to-date knowledge of course content.	A	B	C	D	E
17. Is impolite to students.	A	B	C	D	E
18. Promotes a trusting class atmosphere.	A	B	C	D	E
19. Is difficult to talk with.	A	B	C	D	E
20. Fails to summarize major points of each lesson at the end of class.	A	B	C	D	E
21. Treats students as though they are irresponsible.	A	B	C	D	E

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your **INDIVIDUAL** experiences with this instructor.

A - Very Seldom (or Never)--VS/N
B - Seldom--S
C - Occasionally--OCC
D - Often--OFT
E - Very Often (or Always)--VO/A

The instructor:

	VS/N	S	OCC	OFT	VO/A
22. Expresses appreciation for students' presence in the class.	A	B	C	D	E
23. Acts unfriendly towards students.	A	B	C	D	E
24. Ends each class period on time.	A	B	C	D	E
25. Provides an overview of each lesson.	A	B	C	D	E
26. Appears to enjoy life.	A	B	C	D	E
27. Shows sensitivity to the needs of students.	A	B	C	D	E
28. Works to encourage students' self-confidence.	A	B	C	D	E
29. Presents understandable class objectives.	A	B	C	D	E
30. Looks students in the eye when talking with them.	A	B	C	D	E
31. Shows insensitivity to the feelings of students.	A	B	C	D	E
32. Takes little or no time to talk with students about their out-of-class activities.	A	B	C	D	E
33. Exhibits a sense of humor.	A	B	C	D	E
34. Pauses for several seconds after asking a question.	A	B	C	D	E
35. Speaks unclearly.	A	B	C	D	E
36. Presents course content in a disorganized manner.	A	B	C	D	E
37. Asks questions to stimulate thinking.	A	B	C	D	E
38. Is unwilling to help students having special problems.	A	B	C	D	E
39. Expects high academic performance from students.	A	B	C	D	E
40. Is unwilling to express a lack of knowledge on a subject.	A	B	C	D	E
41. Presents a smooth transition from one topic to another.	A	B	C	D	E
42. Uses class time efficiently.	A	B	C	D	E
43. Evaluates students' work unfairly.	A	B	C	D	E

APPENDIX B

ITS with 140 items for judges

THE UNIVERSITY OF NORTH CAROLINA AT GREENSBORO**School of Education****January, 1984****Dear Students and Faculty,**

We ask that you participate in a survey on invitational learning by helping us to identify selected factors in instructor excellence.

Attached are 140 brief descriptions of instructor behavior. Next to each description are the letters, "A", "B" and "C."

Please circle "A" if you consider the described behavior to be personally inviting (instructor actions which are intended to summon students cordially to learn and appreciate course content).

Please circle "B" if you consider the described behavior to be personally inviting (instructor which are intended to summon students cordially to feel good about themselves and their abilities in general).

Please circle "C" if you can't say (the described behavior is unclear, inappropriate, vague, unreliable, invalid, or whatever).

Some items are repetitious. Please try to ignore this fact, and give your opinion for each one. Also, please select only one of the three choices.

There is a separate answer sheet. Thank you for not writing on the survey.

Many thanks for your assistance.

Best wishes,

William W. Purkey

Lundee Amos

Nancy Tobias

INVITATIONAL LEARNING SURVEY (I.L.S.)

School of Education
University of North Carolina at Greensboro
January, 1984

William W. Purkey
Lundee Amos
Nancy Tobias

Directions

Please circle "A" if you think the described behavior is personally inviting (instructor actions which summon students cordially to learn and appreciate course content).

Please circle "B" if you think the described behavior is personally inviting (instructor actions which summon students cordially to feel good about themselves and their abilities in general).

Please circle "C" if you can't say (the described behavior is unclear, vague, inappropriate, unreliable, invalid, or whatever).

	<u>Prof.</u> <u>Inv.</u>	<u>Pers.</u> <u>Inv.</u>	<u>Can't</u> <u>Say</u>
1. The instructor demonstrates an up-to-date knowledge of course content.	A	B	C
2. The instructor treats students equally.	A	B	C
3. The instructor is skillful in facilitating class discussion.	A	B	C
4. The instructor shares his or her out-of-class experiences with students.	A	B	C
5. The instructor presents the course content in an organized manner.	A	B	C
6. The instructor uses class time efficiently	A	B	C
7. The instructor encourages students to organize a "refreshment" committee	A	B	C
8. The instructor shows the ability to take criticism	A	B	C
9. The instructor gives good examples to clarify the material.	A	B	C
10. The instructor speaks with expression.	A	B	C
11. The instructor involves students in decision making processes.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
12. The instruction chooses appropriate readings for this course.	A	B	C
13. The instructor uses humor.	A	B	C
14. The instructor holds class during regularly scheduled class periods.	A	B	C
15. The instructor speaks clearly.	A	B	C
16. The instructor demonstrates respect for students.	A	B	C
17. The instructor shows appropriate facial expressions.	A	B	C
18. The instructor makes an effort to learn students' names.	A	B	C
19. The instructor takes pride in his/her appearance.	A	B	C
20. The instructor assigns grades fairly.	A	B	C
21. The instructor is approachable by students.	A	B	C
22. The instructor is consistently polite to students	A	B	C
23. The instructor holds students responsible for learning the content of the course.	A	B	C
24. The instructor's comments are free of prejudices (racism, sexism, etc.).	A	B	C
25. The instructor works to create a pleasing physical environment	A	B	C
26. The instructor takes students seriously.	A	B	C
27. The instructor presents ideas that are thought-provoking.	A	B	C
28. The instructor relates to class members as individuals.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
29. The instructor appears to enjoy life.	A	B	C
30. The instructor maintains a good social relationship with students.	A	B	C
31. The instructor clearly explains grading procedures.	A	B	C
32. The instructor works to make the class enjoyable.	A	B	C
33. The instructor works to build student self-confidence.	A	B	C
34. The instructor explains ideas clearly.	A	B	C
35. The instructor is consistent in his or her actions.	A	B	C
36. The instructor is consistently on time for class.	A	B	C
37. The instructor exhibits a sense of humor.	A	B	C
38. The instructor relates subject matter to current events.	A	B	C
39. The instructor works to create a pleasant social environment.	A	B	C
40. The instructor assigns reading that is appropriate for this course.	A	B	C
41. The instructor is easy to talk with.	A	B	C
42. The instructor provides a preliminary overview of each lecture.	A	B	C
43. The instructor expresses a willingness to help students having special problems.	A	B	C
44. The instructor promptly evaluates the work students produce.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
45. The instructor says goodbye to students as they leave class.	A	B	C
46. The instructor explains ideas in a way that is to the point.	A	B	C
47. The instructor explains why he/she does certain things.	A	B	C
48. The instructor acts friendly towards students.	A	B	C
49. The instructor summarizes major points of the lecture at the end of class.	A	B	C
50. The instructor includes facts and ideas from other fields.	A	B	C
51. The instructor uses concrete examples when explaining subject matter.	A	B	C
52. The instructor varies the tone of his/her voice.	A	B	C
53. The instructor advises students regarding class requirements.	A	B	C
54. The instructor uses audiovisual aids.	A	B	C
55. The instructor discloses his or her feelings about things other than class content.	A	B	C
56. The instructor summarizes the subject matter periodically.	A	B	C
57. The instructor takes time to take with students about their out-of-class activities.	A	B	C
58. The instructor gets points across clearly.	A	B	C
59. The instructor shows keen interest in the subject matter.	A	B	C
60. The instructor seems to enjoy the out-of-class company of students.	A	B	C
61. The instructor treats each student as a trustworthy person.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
62. The instructor calls students by name.	A	B	C
63. The instructor is willing to express his or her lack of knowledge on a particular subject.	A	B	C
64. The instructor asks questions to elicit thinking throughout each lesson.	A	B	C
65. The instructor treats each student as a valuable person.	A	B	C
66. The instructor's evaluation of student work is fair.	A	B	C
67. The instructor expresses enthusiasm about the course content.	A	B	C
68. The instructor shows consideration of students' feelings.	A	B	C
69. The instructor gives several examples to explain complex ideas.	A	B	C
70. The instructor makes class time valuable to students.	A	B	C
71. The instructor presents the subject matter with skill.	A	B	C
72. The instructor is prepared for class.	A	B	C
73. The instructor shows sensitivity to the needs of students.	A	B	C
74. The instructor praises students when they express good ideas.	A	B	C
75. The instructor writes important words on the board.	A	B	C
76. The instructor seems to take care of himself/herself physically.	A	B	C
77. The instructor calls students by their names.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
78. The instructor uses clear examples and illustrations.	A	B	C
79. The instructor shares his or her successes and failures with students.	A	B	C
80. The instructor appears to enjoy his or her teaching.	A	B	C
81. The instructor tells students when they have performed well.	A	B	C
82. The instructor expresses a wide range of interests.	A	B	C
83. The instructor suggests ways to help the students remember information.	A	B	C
84. The instructor presents abstract ideas and theories clearly.	A	B	C
85. The instructor uses his/her arms and hand appropriately in expressing ideas.	A	B	C
86. The instructor uses drawings to explain concepts.	A	B	C
87. The instructor demonstrates a good sense of "timing."	A	B	C
88. The instructor makes a special effort to get all students involved in discussions.	A	B	C
89. The instructor's mannerisms are appropriate.	A	B	C
90. The instructor presents a smooth transition from one topic to another.	A	B	C
91. The instructor expresses appreciation for students' presence in his/her class.	A	B	C
92. The instructor looks students in the eye when he/she talks with them.	A	B	C
93. The instructor is an excellent speaker.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof.</u> <u>Inv.</u>	<u>Pers.</u> <u>Inv.</u>	<u>Can't</u> <u>Say</u>
94. The instructor adapts his/her teaching methods to the interests of students.	A	B	C
95. The instructor dresses well.	A	B	C
96. The instructor appears to be well prepared for class.	A	B	C
97. The instructor presents clear class objectives.	A	B	C
98. The instructor maintains a good out-of-class relationship with students.	A	B	C
99. The instructor presents examples to explain complex ideas.	A	B	C
100. The instructor promotes a class atmosphere that is trusting.	A	B	C
101. The instructor behaves towards students in a non-threatening manners.	A	B	C
102. The instructor clearly explains how each topic relates to the overall concept of the course.	A	B	C
103. The instructor works to create a caring class.	A	B	C
104. The instructor presents material in an organized manner.	A	B	C
105. The instructor presents understandable explanations of the subject matter.	A	B	C
106. The instructor recommends his or her favorite books to students.	A	B	C
107. The instructor shakes hands with students.	A	B	C
108. The instructor speaks to be heard clearly.	A	B	C
109. The instructor ask individual students questions.	A	B	C
110. The instructor uses "ice breakers" to "warm up" the class.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Say</u>
111. The instructor moves about in an appropriate manner while presenting material.	A	B	C
112. The instructor works to encourage student self-esteem.	A	B	C
113. The instructor expresses high expectations for each student.	A	B	C
114. The instructor looks people in the eye when talking with them.	A	B	C
115. The instructor uses a variety of media.	A	B	C
116. The instructor greets students as they enter the classroom.	A	B	C
117. The instructor clearly answers questions.	A	B	C
118. The instructor uses a variety of methods to help students learn.	A	B	C
119. The instructor smiles at appropriate times.	A	B	C
120. The instructor gives practical applications of the subject matter.	A	B	C
121. The instructor treats each student as a responsible person.	A	B	C
122. The instructor is attentive to each student when he or she speaks.	A	B	C
123. The instructor demonstrates high academic expectations for students.	A	B	C
124. The instructor shows sensitivity towards the feelings of people.	A	B	C
125. The instructor provides a reading list for this course.	A	B	C
126. The instructor exhibits a tolerance for students' views.	A	B	C

INVITATIONAL LEARNING SURVEY (I.L.S.)

	<u>Prof. Inv.</u>	<u>Pers. Inv.</u>	<u>Can't Sav</u>
127. The instruction seems to have a zest for living.	A	B	C
128. The instructor seems to enjoy meeting with students.	A	B	C
129. The instructor discloses his or her feelings with class members.	A	B	C
130. The instructor has the classroom environment ready for instruction.	A	B	C
131. The instructor gives frequent tests.	A	B	C
132. The instructor uses tests to evaluate performance of objectives.	A	B	C
133. The instructor assigns students responsibilities.	A	B	C
134. The instructor gives clear directions.	A	B	C
135. The instructor intersperses questions throughout each lesson.	A	B	C
136. The instructor uses "wait time" (a pause of several seconds after asking a question.	A	B	C
137. The instructor places strong academic demands on students.	A	B	C
138. The instructor expresses happiness with the class.	A	B	C
139. The instructor shares information gained by attending conference and workshops.	A	B	C
140. The instructor describes his or her professional organizations and activities.	A	B	C

Thank you for your assistance with this survey.

William W. Purkey

Lundee Amos

Nancy Tobias

APPENDIX C

**65-item ITS used for factor analysis and reliability studies,
instructions to teachers, students, and proctor**

DO NOT MARK ON THE SURVEY**INVITATIONAL TEACHING SURVEY**

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your **INDIVIDUAL** experiences with this instructor.

- A - Very Often**
B - Often
C - Occasionally
D - Seldom
E - Very Seldom

V O O S V
E F C E E
R T C L R
Y E A D Y
N S O M
O I O
F O S
T N E L
E A L D
N L O M
Y

The Instructor:

- | | | | | | |
|---|---|---|---|---|---|
| 1. Uses tests to evaluate performance objectives. | A | B | C | D | E |
| 2. Shares his or her out-of-class experiences with students. | A | B | C | D | E |
| 3. Presents course content in a disorganized manner. | A | B | C | D | E |
| 4. Speaks unclearly. | A | B | C | D | E |
| 5. Exhibits a sense of humor. | A | B | C | D | E |
| 6. Fails to clearly explain grading procedures. | A | B | C | D | E |
| 7. Expresses displeasure with the class. | A | B | C | D | E |
| 8. Advises students regarding class requirements. | A | B | C | D | E |
| 9. Ignores students in decision making processes. | A | B | C | D | E |
| 10. Shows sensitivity to the needs of students. | A | B | C | D | E |
| 11. Treats each student as untrustworthy. | A | B | C | D | E |
| 12. Is hard to talk with. | A | B | C | D | E |
| 13. Is impolite to students. | A | B | C | D | E |
| 14. Asks questions to stimulate thinking throughout each lesson. | A | B | C | D | E |
| 15. Fails to have the classroom environment ready for instruction. | A | B | C | D | E |
| 16. Makes an effort to learn students' names. | A | B | C | D | E |
| 17. Takes time to talk with students about their out-of-class activities. | A | B | C | D | E |

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your INDIVIDUAL experiences with this instructor.

- A - Very Often
 B - Often
 C - Occasionally
 D - Seldom
 E - Very Seldom

V O O S V
 E F C E E
 R T C L R
 Y T A D Y
 N S O M S
 O I O S E
 F T T L L
 T E A A D
 E N L L D
 N L L O M

The Instructor:

- | | | | | | |
|--|---|---|---|---|---|
| 18. Is late for class. | A | B | C | D | E |
| 19. Is unprepared for class. | A | B | C | D | E |
| 20. Behaves towards students in a non-threatening manner. | A | B | C | D | E |
| 21. Includes facts and ideas from other fields. | A | B | C | D | E |
| 22. Expresses a willingness to help students having special problems. | A | B | C | D | E |
| 23. Is unwilling to express his or her lack of knowledge on a particular subject. | A | B | C | D | E |
| 24. Expects high academic performance from students. | A | B | C | D | E |
| 25. Suggests ways to help students remember information. | A | B | C | D | E |
| 26. Is inattentive to students when they speak. | A | B | C | D | E |
| 27. Does not look students in the eye when he or she talks with them. | A | B | C | D | E |
| 28. Makes no effort to create a caring class atmosphere. | A | B | C | D | E |
| 29. Lacks an up-to-date knowledge of course content. | A | B | C | D | E |
| 30. Treats students as individuals. | A | B | C | D | E |
| 31. Uses class time inefficiently. | A | B | C | D | E |
| 32. Works to build students' self-confidence. | A | B | C | D | E |
| 33. Smiles at appropriate times. | A | B | C | D | E |
| 34. Is slow in evaluating the work of students. | A | B | C | D | E |
| 35. Works to encourage student self-esteem. | A | B | C | D | E |
| 36. Neglects to clearly explain how each topic relates to the overall concept of the course. | A | B | C | D | E |

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your INDIVIDUAL experiences with this instructor.

- A - Very Often
 B - Often
 C - Occasionally
 D - Seldom
 E - Very Seldom

V O O S V
 E F C E E
 R T C L R
 Y E A D Y
 N S O M S
 O I O E L
 F T N A L D
 T E N A L D
 E N L L O M
 N A L L O M
 Y Y

The Instructor:

- | | | | | | |
|--|---|---|---|---|---|
| 37. Summarizes the subject matter periodically. | A | B | C | D | E |
| 38. Evaluates students' work fairly. | A | B | C | D | E |
| 39. Shares information gained by attending conferences and workshops. | A | B | C | D | E |
| 40. Clearly answers questions. | A | B | C | D | E |
| 41. Expresses enthusiasm about the course content. | A | B | C | D | E |
| 42. Expresses appreciation for students' presence in his or her class. | A | B | C | D | E |
| 43. Presents unclear class objectives. | A | B | C | D | E |
| 44. Appears to be unable to enjoy life. | A | B | C | D | E |
| 45. Uses a variety of methods to help students learn. | A | B | C | D | E |
| 46. Shows a lack of respect for students. | A | B | C | D | E |
| 47. Shows sensitivity towards the feelings of students. | A | B | C | D | E |
| 48. Facilitates class discussion with skill. | A | B | C | D | E |
| 49. Acts friendly towards students. | A | B | C | D | E |
| 50. Holds class during unscheduled class periods. | A | B | C | D | E |
| 51. Promotes a class atmosphere that is trusting. | A | B | C | D | E |
| 52. Fails to relate subject matter to current events. | A | B | C | D | E |
| 53. Presents a smooth transition from one topic to another. | A | B | C | D | E |
| 54. Praises students when they express good ideas. | A | B | C | D | E |
| 55. Ignores students as they enter the classroom. | A | B | C | D | E |
| 56. Uses drawings to explain concepts. | A | B | C | D | E |

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your **INDIVIDUAL** experiences with this instructor.

- A - Very Often
 B - Often
 C - Occasionally
 D - Seldom
 E - Very Seldom

V O O S V
 E F C E E
 R T C L R
 Y E A D Y
 N S O M S
 O I O E S
 F O L L E
 T E A L D
 N L L O M
 Y Y

The Instructor:

- | | | | | | |
|--|---|---|---|---|---|
| 57. Treats students as though they are irresponsible. | A | B | C | D | E |
| 58. Fails to allow "wait time" (a pause of several seconds) after asking a question. | A | B | C | D | E |
| 59. Neglects to treat students as valuable people. | A | B | C | D | E |
| 60. Provides a preliminary overview of each lecture. | A | B | C | D | E |
| 61. Fails to use a variety of media. | A | B | C | D | E |
| 62. Chooses appropriate readings for the course. | A | B | C | D | E |
| 63. Fails to summarize major points of the lecture at the end of class. | A | B | C | D | E |
| 64. Exhibits an acceptance of students' views. | A | B | C | D | E |
| 65. Neglects to write important words on the board. | A | B | C | D | E |

THANK YOU FOR RESPONDING TO THE FOLLOWING BACKGROUND INFORMATION:

- | | | | | | |
|---|---|---|---|---|---|
| 66. MARK: A if you are a male
B if you are female | A | B | C | D | E |
| 67. MARK: A if you are under 17 years old
B if you are between 18-28
C if you are between 29-39
D if you are between 40-50
E if you are over 50 | A | B | C | D | E |

68. (DO NOT ANSWER THIS QUESTION UNLESS YOU ATTEND A COMMUNITY COLLEGE, A TECHNICAL INSTITUTE, OR A HIGH SCHOOL)

- MARK: A if you are a student at
GTCC
B if you are a student at
Rockingham Community College
C if you are a student at
Forsyth Technical Institute
D if you are a high school
student
E if you attend another
college
- A B C D E

69. (DO NOT ANSWER THIS QUESTION UNLESS YOU ATTEND A STATE UNIVERSITY OR A PRIVATE COLLEGE)

- MARK: A if you are a student at UNC-G
B if you are a student at A&T
C if you are a student at
Greensboro College
D if you are a student at
Bennett College
E if you attend another
college
- A B C D E

70. MARK: A if you are either a freshman
or a sophomore in college
B if you are a junior in
college
C if you are a senior in
college
D if you are a graduate
student in college
E if you are a high school
senior
- A B C D E

71. MARK: A if your major is nursing
B if your major is dental
hygiene
C if your major is business
D if your major is counseling
E if your major is other than
the above
- A B C D E

72. MARK: A if you are Black
B if you are White
C if you are Hispanic
D if you are Oriental
E if you are Other
- A B C D E

THANK YOU FOR TAKING TIME TO HELP US WITH THIS RESEARCH!!!

NANCY TOBIAS LUNDEE AMOS W.W. PURKEY

MEMO

To: Volunteer Teachers
From: Dr. William W. Purkey
Lundee Amos
Nancy Tobias
Date: April 24, 1984
Re: Participation in Invitational Teaching Survey (ITS)

We appreciate your willingness to participate in the validation of the Invitational Teaching Survey (ITS). This survey is being made in conjunction with the development of the ITS which is designed to measure personally and professionally inviting teacher practices. The final instrument will be used by instructors for self-improvement and not for salary decisions or promotions. Nancy Tobias and Lundee Amos plan to use the ITS in their doctoral dissertations at the University of North Carolina at Greensboro. Thank you for agreeing to participate in this research.

If at all possible, please allow your class to use 15 minutes of class time to complete the survey. If this is not possible the students may take the survey home to complete it, but please emphasize to the students the importance of their returning the completed survey at your next class meeting.

So that students' rights to confidentiality are protected, please ask a student volunteer to act as proctor. Instructions for the student proctor are enclosed with the instruments.

A. If the students complete the survey in class:

1. Give the envelope that contains the surveys to the student proctor.
2. Please leave the room while the survey is being completed. The proctor will notify you when the surveys have been returned to the envelope.
3. Have the proctor deliver the completed surveys to the department secretary.

B. If the students complete the survey out-of-class:

1. Leave the classroom while the proctor distributes the surveys to the students.
2. At the next class meeting, please allow time for the student proctor to collect the surveys and deliver them to the department secretary.
3. While the surveys are being collected, please remain out of the room.

Thank you for your cooperation and patience in supporting our efforts to complete the research on the Invitational Teaching Survey.

Nancy Tobias Lundee Amos W.W. Purkey

Student Proctor: Please read aloud the instructions for students and ask them to read silently along with you.

INSTRUCTIONS FOR STUDENT

We appreciate your willingness to participate in this important research about the Invitational Teaching Survey (ITS). This survey is being made in conjunction with the development of the ITS which is designed to measure personally and professionally inviting teacher practices. The final instrument will be used by instructors for self-improvement and not for salary decisions or promotions. Nancy Tobias and Lundee Amos plan to use the ITS in their doctoral dissertations at the University of North Carolina at Greensboro.

Your participation is voluntary and all of your responses are confidential. Your decision to participate or not to participate will not in anyway influence your grade for this course. Your instructor will not see the completed answer sheets.

PLEASE DO NOT PUT YOUR NAME OR ANY MARKS ON THE INVITATIONAL TEACHING SURVEY. DO NOT PUT YOUR NAME OR THE NAME OF THE INSTRUCTOR YOU ARE RATING ON THE ANSWER SHEET.

DIRECTIONS

Please read and carefully follow these special instructions.

1. Rate the instructor for this class according to your own experiences with him or her.
2. A special answer sheet and #2 pencil are provided. Use only the #2 pencil and mark all your responses on the answer sheet. **ANSWER WITH A HEAVY PENCIL MARK and fill the answer block completely. DO NOT** mark more than one response for each item.

Example: Shows a willingness to be flexible.

- a. very often
- b. often
- c. occasionally
- d. seldom
- e. very seldom

[a] [b] [d] [e]

3. Erase **COMPLETELY** any responses you wish to change.
4. When you are finished, return the survey, the answer sheet and the #2 pencil to your student proctor.

Student proctor:

1. Please return the surveys, answer sheets, and pencils to the envelope.
2. Seal the envelope.
3. Deliver it to the department secretary.

APPENDIX D
Factor Analysis Tables

Table D1

Matrix Rotated to Varimax Criterion

Item	Factor 1	Factor 2	Factor 3	Factor 4
1	0.02458	-0.18402	0.34355	0.13444
2	0.58889	-0.02197	-0.03917	0.06197
3	0.02380	-0.02197	-0.03917	0.62575
4	0.10570	0.19936	0.04291	0.47289
5	0.49544	0.19560	0.10282	0.18231
6	0.14909	0.26335	0.19382	0.53478
7	0.14033	0.48307	-0.03857	0.29686
8	0.38801	0.10783	0.25971	0.19939
9	0.23155	0.44037	0.04268	0.35145
10	0.57366	0.38382	0.17506	0.16254
11	0.11795	0.42739	-0.10054	0.35749
12	0.21492	0.49793	0.16432	0.41692
13	0.13501	0.54154	-0.05336	0.28930
14	0.45319	0.04372	0.27661	0.25966
15	0.16102	0.13356	0.18183	0.57547
16	0.47976	0.05820	0.03647	0.04096
17	0.66946	0.09188	0.10922	0.06299
18	0.16295	0.02371	0.02591	0.55097
19	0.03854	0.04911	0.08665	0.60087
20	0.18820	0.38821	0.06629	-0.00753
21	0.52709	0.00360	0.20537	0.09327
22	0.55095	0.30760	0.29387	0.12515
23	0.09902	0.17171	0.09458	0.31824
24	0.23715	-0.15837	0.11120	0.03686
25	0.38254	0.02507	0.41395	0.24658
26	0.09047	0.37280	0.03222	0.30059
27	0.08113	0.41045	0.06934	0.31998
28	0.39336	0.17876	0.07530	0.28093
29	0.06515	0.25242	0.13483	0.46831
30	0.43312	0.41238	0.24215	0.07943
31	0.00138	0.17238	0.28880	0.46298
32	0.56452	0.34710	0.31881	0.12962
33	0.42018	0.38872	0.22174	0.12703
34	0.13469	0.12229	0.26693	0.48099
35	0.56850	0.33840	0.30487	0.10437
36	0.15491	0.22541	0.38099	0.47954
37	0.34651	0.05742	0.53383	0.15661
38	0.29782	0.35099	0.38257	0.22333
39	0.53379	0.05294	0.11259	0.05262

Table D1 continued

Matrix Rotated To Varimax Criterion

Item	Factor 1	Factor 2	Factor 3	Factor 4
40	0.35452	0.28869	0.45227	0.36755
41	0.50006	0.10134	0.40102	0.19801
42	0.48263	0.29319	0.42869	0.05043
43	0.09518	0.26666	0.41578	0.47920
44	0.06996	0.47981	0.08730	0.20229
45	0.38247	0.18255	0.51448	0.18950
46	0.09566	0.65265	0.19506	0.19021
47	0.54783	0.45597	0.30982	0.01212
48	0.39525	0.22492	0.53668	0.23461
49	0.34872	0.58633	0.33395	0.05404
50	-0.05191	0.42433	0.13067	0.12057
51	0.39905	0.47863	0.41251	0.05786
52	0.11960	0.32359	0.32413	0.30506
53	0.20241	0.26358	0.61537	0.26719
54	0.40149	0.39325	0.42546	-0.04646
55	0.24480	0.25000	0.24277	0.03892
56	0.21023	0.03830	0.50609	0.03689
57	0.12837	0.64861	0.21042	0.19437
58	-0.04916	0.44150	0.23074	0.20800
59	0.12114	0.64860	0.28950	0.22690
60	0.22429	0.14833	0.64659	0.13947
61	0.15097	0.18212	0.42878	0.28600
62	0.22523	0.12336	0.52611	0.09777
63	0.07883	0.26493	0.52283	0.32153
64	0.35373	0.41763	0.44596	0.03350
65	0.02980	0.27347	0.47866	0.31008

Note. N = 1491 student ratings

APPENDIX E
ITS Subscores and Clusters

43 ITEMS OF FINAL INVITATIONAL TEACHING SURVEY (ITS)
LISTED IN SUBSCORES AND CLUSTERS

Personally Inviting Practices

Subscore I-Commitment

Cluster A-Disclosing

- 8. Shares out-of-class experiences with students.
- 32. Takes little or no time to talk with students about their out-of-class activities.
- 33. Exhibits a sense of humor.

Cluster B-Supporting

- 22. Expresses appreciation for students' presence in the class.
- 27. Shows sensitivity to the needs of students.
- 28. Works to encourage students' self-confidence.
- 31. Shows insensitivity to the feelings of students.
- 38. Is unwilling to help students having special problems.

Cluster C-Investing

- 4. Makes a special effort to learn students' names.
- 6. Demonstrates a lack of enthusiasm about the course.
- 37. Asks questions to stimulate thinking.

Subscore II- Consideration

Cluster A-Attending

- 17. Is impolite to students.
- 19. Is difficult to talk with.
- 30. Looks students in the eye when talking with them.
- 34. Pauses for several seconds after asking a question.

Cluster B-Affirming

- 2. Shows a lack of respect for students.
- 15. Involves students in decision-making processes.
- 18. Promotes a trusting class atmosphere.
- 21. Treats students as though they are irresponsible.

Cluster C-Cheering

- 9. Expresses pleasure with the class.
- 23. Acts unfriendly towards students.
- 26. Appears to enjoy life.

Professionally Inviting Practices**Subscore III-Coordination****Cluster A-Clarifying**

- 13. Has difficulty in facilitating class discussion.
- 20. Fails to summarize major points of each lesson at the end of class.
- 25. Provides an overview of each lesson at the beginning of class.
- 41. Presents a smooth transition from one topic to another.

Cluster B-Informing

- 3. Chooses inappropriate readings for the course.
- 10. Uses a variety of methods to help students learn.
- 11. Answers questions clearly.
- 14. Uses tests to evaluate course objectives.
- 40. Is unwilling to express a lack of knowledge on a subject.
- 43. Evaluates students' work unfairly.

Subscore IV-Proficiency**Cluster A-Managing**

- 7. Explains grading procedures adequately.
- 16. Demonstrates an up-to-date knowledge of course content.
- 29. Presents understandable class objectives.
- 35. Speaks unclearly.
- 36. Presents course content in a disorganized manner.

Cluster B-Reliving

- 1. Comes to class late.
- 5. Is unprepared for class.
- 12. Is slow in evaluating students' work.
- 24. Ends each class period on time.
- 42. Uses class time efficiently.

Subscore V-Expectation**Expecting**

- 39. Expects high academic performance from students.

APPENDIX F
Normative Data on ITS (Initial)

Table F1

Summary of Mean Scores of Items ofITS for Personally Inviting Subscore I: COMMITMENT

Item	Mean	Standard Deviation
DISCLOSING		
2	4.022	0.653
5	3.830	0.693
17	3.311	0.751
INVESTING		
14	3.827	0.564
16	4.346	0.737
41	4.150	0.470
SUPPORTING		
10	3.918	0.651
22	3.943	0.547
32	3.634	0.751
42	3.758	0.621
47	3.878	0.693

Note. only data for 67 teachers could be identified

Table F2

Summary of Mean Scores of Items ofITS for Personally Inviting Subscore II: CONSIDERATION

Item	Mean	Standard Deviation
ATTENDING		
12	4.142	0.646
13	4.449	0.427
27	4.447	0.479
58	4.130	0.564
AFFIRMING		
9	4.064	0.643
46	4.390	0.522
51	4.080	0.504
57	4.370	0.564
CHEERING		
7	4.242	0.581
44	4.282	0.412

Note. only data for 67 teachers could be identified

Table F3

Summary of Mean Score of Items ofITS for Professionally Inviting Subscore III: COORDINATION

Item	Mean	Standard Deviation
CLARIFYING		
48.	3.798	0.702
53.	3.731	0.617
60.	3.390	0.682
63.	3.692	0.610
INFORMING		
1.	3.297	1.037
23.	3.818	0.464
38.	4.098	0.575
40.	4.011	0.575
45.	3.542	0.681
62.	3.780	0.610

Note. only data for 67 teachers could be identified

Table F4

**Summary of Mean Scores of Items of ITS for Professionally Inviting
Subscore IV: PROFICIENCY**

Item	Mean	Standard Deviation
MANAGING		
3	3.974	0.851
4	4.139	0.558
6	4.066	0.827
29	4.389	0.561
43	3.920	0.678
RELYING		
18	4.283	0.605
19	4.273	0.536
31	3.796	0.705
34	3.815	0.781
50	4.476	0.407

Note. only data for 67 teachers could be identified

Table F5

Average Mean and Standard Deviation
of Five ITS Subscores and Total

Subscore	Mean	Standard Deviation
PERSONALLY INVITING PRACTICES		
I COMMITMENT (11 items)	51.923	4.981
II CONSIDERATION (11 items)		
	<u>46.946</u>	<u>4.585</u>
Total (I & II)	98.869	9.566
PROFESSIONALLY INVITING PRACTICES		
III COORDINATION (10 items)	37.156	4.792
IV PROFICIENCY (10 items)	41.121	4.796
V EXPECTATION (1 item)		
	<u>3.895</u>	<u>0.596</u>
Total (III, IV, & V)	82.732	10.184
TOTAL (43 items)	171.745	16.878

Note. only data for 67 teachers could be identified

APPENDIX G
SAOM with final 20 items

DO NOT MARK ON THE SHEET**STUDENT AFFECTIVE OUTCOME MEASURES (SAOM)**

INSTRUCTIONS: Mark only one response per statement. Place your response on the answer sheet. Indicate how much you agree or disagree with the statement by marking your feelings on the following scale:

A - if you **STRONGLY AGREE** with the statement--SA

B - if you **AGREE** moderately with the statement--A

C - if you **DISAGREE** moderately with the statement--D

D - if you **STRONGLY DISAGREE** with the statement--SD

	<u>SA</u>	<u>A</u>	<u>D</u>	<u>SD</u>
1. I was uncomfortable in asking questions in this course.	A	B	C	D
2. This course had value for me as a person.	A	B	C	D
3. I was afraid to speak up for my own ideas in this course.	A	B	C	D
4. I feel that my performance in this course was poor.	A	B	C	D
5. I seemed to get along well with other students in this course.	A	B	C	D
6. Overall, this course was among the worst I have taken.	A	B	C	D
7. I would like to take more courses in this subject area.	A	B	C	D
8. I would not like to have this instructor as a friend.	A	B	C	D
9. The subject matter was sometimes boring.	A	B	C	D
10. I do not like this instructor as a person.	A	B	C	D
11. This instructor is among the best teachers I have known.	A	B	C	D
12. I would recommend this course to my friends.	A	B	C	D
13. I related poorly to this instructor.	A	B	C	D
14. This course helped me to fulfill some personal goals.	A	B	C	D
15. I am confident about what I learned in this course.	A	B	C	D
16. I enjoyed learning about this subject matter.	A	B	C	D
17. I would like to work with this instructor on a project of mine not related to course activities.	A	B	C	D
18. I dreaded attending this class.	A	B	C	D
19. I would not recommend this instructor to friends.	A	B	C	D
20. I would like to take more courses from this instructor.	A	B	C	D

APPENDIX H
26-item SAOM for judges

To: Judges

From: Lundee Amos, graduate student in Curriculum and Teaching--UNC-G

Date: August 21, 1984

Re: Judging the validity of measures of student affective outcomes

DIRECTIONS FOR THE JUDGES

Thank you for your help in determining the validity of the enclosed student affective outcomes. I will be using the outcome measures in part of the research for my dissertation.

DIRECTIONS FOR JUDGES OF THE AFFECTIVE STUDENT OUTCOMES

- Enclosed are two separate lists of the affective student outcomes. 1. On the list entitled: **ARE THE ITEMS VALID MEASURES OF STUDENT AFFECTIVE OUTCOMES?**, please mark each item either yes, no, or can't say as to its validity as a measure of student affective outcome.
2. On the list entitled: **WHICH CATEGORY OF STUDENT AFFECTIVE OUTCOMES BEST DESCRIBES THE ITEM?**, please mark each item as falling into one of five categories: (1) Instructor (IN), (2) Course (CO), (3) Subject Matter (SUBM), (4) Self As Learner (SAL), or (5) Other (O).
3. Please return the completed lists in the brown envelope to Dr. Purkey as soon as possible.

I would appreciate comments that may be helpful in determining the validity of the student affective outcomes.

THANK YOU VERY MUCH FOR YOUR HELP!!!!

ARE THE ITEMS VALID MEASURES OF STUDENT AFFECTIVE OUTCOMES?

Student Affective Outcomes are statements that describe a student's liking for and satisfaction with a course, an instructor, the subject matter, and the self(student) as learner. These statements represent the student's perceptions about course outcomes.

PLEASE CIRCLE YES, NO, OR CAN'T SAY

- | | |
|---|------------------|
| 1. I do not like this instructor as a person. | YES NO CAN'T SAY |
| 2. Overall, this course was among the worst I have taken. | YES NO CAN'T SAY |
| 3. This instructor is among the best teachers I have known. | YES NO CAN'T SAY |
| 4. This course had little value for me as a person. | YES NO CAN'T SAY |
| 5. I read a lot for this course. | YES NO CAN'T SAY |
| 6. I put little effort into this course. | YES NO CAN'T SAY |
| 7. This course helped me to fulfill some personal goals. | YES NO CAN'T SAY |
| 8. I dreaded going to class. | YES NO CAN'T SAY |
| 9. The objectives of this course were accomplished. | YES NO CAN'T SAY |
| 10. The subject matter was sometimes boring. | YES NO CAN'T SAY |
| 11. I would recommend this course to my friends. | YES NO CAN'T SAY |
| 12. I learned very little in this course. | YES NO CAN'T SAY |
| 13. I would like to take more courses from this instructor. | YES NO CAN'T SAY |
| 14. I would like to take more courses in this subject area. | YES NO CAN'T SAY |
| 15. I feel that my performance in this course was poor. | YES NO CAN'T SAY |

Student Affective Outcomes are statements that describe a student's liking for and satisfaction with a course, an instructor, the subject matter, and the self(student) as learner. These statements represent the student's perceptions about course outcomes.

PLEASE CIRCLE YES, NO, OR CAN'T SAY

-
- | | |
|--|------------------|
| 16. I would not recommend this instructor to friends. | YES NO CAN'T SAY |
| 17. I would like to work with this instructor on a project of mine not related to course activities. | YES NO CAN'T SAY |
| 18. I would not like to have this instructor as a friend. | YES NO CAN'T SAY |
| 19. I am confident about what I learned in this course. | YES NO CAN'T SAY |
| 20. I seemed to get along well with other students in this course. | YES NO CAN'T SAY |
| 21. I was uncomfortable in asking questions in this course. | YES NO CAN'T SAY |
| 22. I related well to the instructor in this course. | YES NO CAN'T SAY |
| 23. I was afraid to speak up for my own ideas in this course. | YES NO CAN'T SAY |
| 24. I enjoyed learning about this subject matter. | YES NO CAN'T SAY |
| 25. I failed to learn how to locate appropriate sources of material in this subject matter. | YES NO CAN'T SAY |
| 26. This course maintained my attention throughout all the weeks. | YES NO CAN'T SAY |
-

Please add comments that you feel might be helpful in the wording of items. Also, feel free to suggest additional affective outcomes that you feel are important. Thank you for your time and help!!!

APPENDIX I

26-item SAOM of Categories for judges

**WHICH CATEGORY OF STUDENT AFFECTIVE OUTCOMES
BEST DESCRIBES THE ITEM?**

Student Affective Outcomes are statements that describe a student's liking for and satisfaction with a course, an instructor, the subject matter, and the self(student) as learner. These statements represent the student's perceptions about course outcomes.

Decide which of the following categories BEST describes the item:

Instructor (IN), **Course (CO)**, **Subject Matter (SUBM)**, **Self as Learner (SAL)**, or **Other (O)**.

PLEASE CIRCLE: IN = Instructor, CO = Course, SUBM = Subject Matter, SAL = self as learner, or O = other

- | | | | | | |
|---|----|----|------|-----|---|
| 1. I do not like this instructor as a person. | IN | CO | SUBM | SAL | O |
| 2. Overall, this course was among the worst I have taken. | IN | CO | SUBM | SAL | O |
| 3. This instructor is among the best teachers I have known. | IN | CO | SUBM | SAL | O |
| 4. This course had little value for me as a person. | IN | CO | SUBM | SAL | O |
| 5. I read a lot for this course. | IN | CO | SUBM | SAL | O |
| 6. I put little effort into this course. | IN | CO | SUBM | SAL | O |
| 7. This course helped me to fulfill some personal goals. | IN | CO | SUBM | SAL | O |
| 8. I dreaded going to class. | IN | CO | SUBM | SAL | O |
| 9. The objectives of this course were accomplished. | IN | CO | SUBM | SAL | O |
| 10. The subject matter was sometimes boring. | IN | CO | SUBM | SAL | O |
| 11. I would recommend this course to my friends. | IN | CO | SUBM | SAL | O |
| 12. I learned very little in this course. | IN | CO | SUBM | SAL | O |
| 13. I would like to take more courses from this instructor. | IN | CO | SUBM | SAL | O |

Decide which of the following categories BEST describes the item:

Instructor (IN), Course (CO), Subject Matter (SUBM), Self as Learner (SAL), or Other (O).

PLEASE CIRCLE: IN = Instructor, CO = Course, SUBM = Subject Matter, SAL = self as learner, or O = other

-
- | | |
|--|------------------|
| 14. I would like to take more courses in this subject area. | IN CO SUBM SAL O |
| 15. I feel that my performance in this course was poor. | IN CO SUBM SAL O |
| 16. I would not recommend this instructor to friends. | IN CO SUBM SAL O |
| 17. I would like to work with this instructor on a project of mine not related to course activities. | IN CO SUBM SAL O |
| 18. I would not like to have this instructor as a friend. | IN CO SUBM SAL O |
| 19. I am confident about what I learned in this course. | IN CO SUBM SAL O |
| 20. I seemed to get along well with other students in this course. | IN CO SUBM SAL O |
| 21. I was uncomfortable in asking questions in this course. | IN CO SUBM SAL O |
| 22. I related well to the instructor in this course. | IN CO SUBM SAL O |
| 23. I was afraid to speak up for my own ideas in this course. | IN CO SUBM SAL O |
| 24. I enjoyed learning about this subject matter. | IN CO SUBM SAL O |
| 25. I failed to learn how to locate useful sources of material in this subject matter. | IN CO SUBM SAL O |
| 26. This course maintained my attention throughout all the weeks. | IN CO SUBM SAL O |

Please add comments that would be helpful in categorizing the student affective outcome measures. Thank you again for your time and help!!

APPENDIX J

Sub-categories of 20-item SAOM

ITEMS 1-20
STUDENT AFFECTIVE OUTCOME MEASURES(SAOM)
AS LISTED IN SUBSCORES

COURSE

- 2. This course had value for me as a person.
- 6. Overall, this course was among the worst I have taken.
- 12. I would recommend this course to my friends.

SUBJECT MATTER

- 7. I would like to take more courses in this subject area.
- 9. The subject matter was sometimes boring.
- 16. I enjoyed learning about this subject matter.

INSTRUCTOR

- 8. I would not like to have this instructor as a friend.
- 10. I do not like this instructor as a person.
- 11. This instructor is among the best teachers I have known.
- 13. I related poorly to this instructor.
- 17. I would like to work with this instructor on a project of mine not related to course activities.
- 19. I would not recommend this instructor to friends.
- 20. I would like to take more courses from this instructor.

SELF AS LEARNER

- 1. I was uncomfortable in asking questions in this course.
- 3. I was afraid to speak up for my own ideas in this course.
- 4. I feel that my performance in this course was poor.
- 5. I seemed to get along well with other students in this course.
- 7. This course helped me to fulfill some personal goals.
- 15. I am confident about what I learned in this course.
- 18. I dreaded attending this class.

APPENDIX K

**ITS, SAOM, student demographic questions
instructions for student proctor and teachers**

PLEASE DO NOT MARK ON THE SURVEY**INVITATIONAL TEACHING SURVEY(ITS)**

by Amos, Purkey, & Tobias, 1984

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your **INDIVIDUAL** experiences with this instructor. Mark only one response per item.

A - Very Seldom (or Never)--VS/N

B - Seldom--S

C - Occasionally--OCC

D - Often--OFT

E - Very Often (or Always)--VO/A

The Instructor:

	VS/N	S	OCC	OFT	VO/A
1. Expresses pleasure with the class.	A	B	C	D	E
2. Shows a lack of respect for students.	A	B	C	D	E
3. Chooses inappropriate readings for the course.	A	B	C	D	E
4. Makes a special effort to learn students' names.	A	B	C	D	E
5. Is unprepared for class.	A	B	C	D	E
6. Demonstrates a lack of enthusiasm about the course.	A	B	C	D	E
7. Explains grading procedures adequately.	A	B	C	D	E
8. Shares out-of-class experiences.	A	B	C	D	E
9. Comes to class late.	A	B	C	D	E
10. Uses a variety of methods to help students learn.	A	B	C	D	E
11. Answers questions clearly.	A	B	C	D	E
12. Is slow in evaluating students' work.	A	B	C	D	E
13. Has difficulty in facilitating class discussion.	A	B	C	D	E
14. Uses tests to evaluate course objectives.	A	B	C	D	E
15. Involves students in decision-making processes.	A	B	C	D	E
16. Demonstrates an up-to-date knowledge of course content.	A	B	C	D	E
17. Is impolite to students.	A	B	C	D	E
18. Promotes a trusting class atmosphere.	A	B	C	D	E
19. Is difficult to talk with.	A	B	C	D	E
20. Fails to summarize major points of each lesson at the end of class.	A	B	C	D	E
21. Treats students as though they are irresponsible.	A	B	C	D	E

INSTRUCTIONS: Rate the instructor by selecting the response for each item which best describes your INDIVIDUAL experiences with this instructor.

A - Very Seldom (or Never)--VS/N
 B - Seldom--S
 C - Occasionally--OCC
 D - Often--OFT
 E - Very Often (or Always)--VO/A

The instructor:

	VS/N	S	OCC	OFT	VO/A
22. Expresses appreciation for students' presence in the class.	A	B	C	D	E
23. Acts unfriendly towards students.	A	B	C	D	E
24. Ends each class period on time.	A	B	C	D	E
25. Provides an overview of each lesson.	A	B	C	D	E
26. Appears to enjoy life.	A	B	C	D	E
27. Shows sensitivity to the needs of students.	A	B	C	D	E
28. Works to encourage students' self-confidence.	A	B	C	D	E
29. Presents understandable class objectives.	A	B	C	D	E
30. Looks students in the eye when talking with them.	A	B	C	D	E
31. Shows insensitivity to the feelings of students.	A	B	C	D	E
32. Takes little or no time to talk with students about their out-of-class activities.	A	B	C	D	E
33. Exhibits a sense of humor.	A	B	C	D	E
34. Pauses for several seconds after asking a question.	A	B	C	D	E
35. Speaks unclearly.	A	B	C	D	E
36. Presents course content in a disorganized manner.	A	B	C	D	E
37. Asks questions to stimulate thinking.	A	B	C	D	E
38. Is unwilling to help students having special problems.	A	B	C	D	E
39. Expects high academic performance from students.	A	B	C	D	E
40. Is unwilling to express a lack of knowledge on a subject.	A	B	C	D	E
41. Presents a smooth transition from one topic to another.	A	B	C	D	E
42. Uses class time efficiently.	A	B	C	D	E
43. Evaluates students' work unfairly.	A	B	C	D	E

PLEASE DO NOT MARK ON THIS SHEET

INSTRUCTIONS: Mark only one response per statement. Place your response on the answer sheet. Indicate how much you agree or disagree with the statement by marking your feelings on the following scale:

A - if you STRONGLY AGREE with the statement--SA

B - if you AGREE moderately with the statement--A

C - if you DISAGREE moderately with the statement--D

D - if you STRONGLY DISAGREE with the statement--SD

	<u>SA</u>	<u>A</u>	<u>D</u>	<u>SD</u>
44. I was uncomfortable in asking questions in this course.	A	B	C	D
45. This course had value for me as a person.	A	B	C	D
46. I was afraid to speak up for my own ideas in this course.	A	B	C	D
47. I feel that my performance in this course was poor.	A	B	C	D
48. I seemed to get along well with other students in this course.	A	B	C	D
49. Overall, this course was among the worst I have taken.	A	B	C	D
50. I would like to take more courses in this subject area.	A	B	C	D
51. I would not like to have this instructor as a friend.	A	B	C	D
52. The subject matter was sometimes boring.	A	B	C	D
53. I do not like this instructor as a person.	A	B	C	D
54. This instructor is among the best teachers I have known.	A	B	C	D
55. I would recommend this course to my friends.	A	B	C	D
56. I related poorly to this instructor.	A	B	C	D
57. This course helped me to fulfill some personal goals.	A	B	C	D
58. I am confident about what I learned in this course.	A	B	C	D
59. I enjoyed learning about this subject matter.	A	B	C	D
60. I would like to work with this instructor on a project of mine not related to course activities.	A	B	C	D
61. I dreaded attending this class.	A	B	C	D
62. I would not recommend this instructor to friends.	A	B	C	D
63. I would like to take more courses from this instructor.	A	B	C	D

*******PLEASE TURN THE PAGE OVER**

THANK YOU FOR RESPONDING TO THE FOLLOWING ITEMS ON GENERAL INFORMATION ABOUT YOURSELF:

64. SEX:

- A female
- B male

65. AGE:

- A under 18 years old
- B between 18-23 years old
- C between 24-29 years old
- D between 30-34 years old
- E 35 years old and over

66. ETHNIC BACKGROUND:

- A Black
- B White
- C Hispanic
- D Oriental
- E Other

67. YEAR IN COLLEGE:

- A freshman
- B sophomore
- C junior
- D senior
- E graduate student

68. COLLEGE ATTENDANCE PRIOR TO ENTERING DENTAL HYGIENE:

- A less than 1 year
- B 1-3 years
- C 4 year college degree
- D graduate degree

69. COMPLETED A DENTAL ASSISTANTS' EDUCATIONAL PROGRAM:

- A yes
- B no

70. WORKED AS A DENTAL ASSISTANT:

- A yes
- B no

THANK YOU FOR HELPING WITH THIS RESEARCH!!!

To: Dental Hygiene Students
From: Lundee Amos, R.D.H., B.S., M.Ed.
Re: Invitational Teaching Study
Date: Fall, 1984

Student Proctor: After you distribute the survey, answer sheets, and pencils, please read aloud the instructions for students and ask them to read silently along with you. Please fill-out a survey for yourself.

INSTRUCTIONS FOR STUDENTS

I am an instructor in the dental hygiene program at Guilford Technical Community College in Jamestown, N.C. I appreciate your willingness to participate in this important research to help dental hygiene educators improve their teaching. This research is part of the requirements for my doctoral degree in Curriculum and Teaching at the University of North Carolina at Greensboro.

Your participation is voluntary and all of your responses are confidential. Your decision to participate or not to participate will in no way influence your grade for this course. Your instructor will not see the completed answer sheets.

PLEASE DO NOT PUT YOUR NAME OR ANY MARKS ON THE INVITATIONAL TEACHING SURVEY. DO NOT PUT YOUR NAME OR THE NAME OF THE INSTRUCTOR YOU ARE RATING ON THE ANSWER SHEET.

DIRECTIONS

Please follow these special instructions.

1. Rate the instructor for this class according to your own experiences with him or her.
2. Please disregard the blue space on the answer sheet and the name section.
3. A special answer sheet and #2 pencil are provided.
Use only the #2 pencil and mark all your responses on the answer sheet.
ANSWER WITH A HEAVY PENCIL MARK and fill the answer block completely. DO NOT mark more than one response for each item.

Example: Shows a willingness to be flexible.

- a. very often or always
- b. often
- c. occasionally
- d. seldom
- e. very seldom or never a b c e

4. Erase **COMPLETELY** any responses you wish to change.
5. When you are finished, return the survey and the answer sheet to your student proctor. You may keep the pencil.

Student proctor:

1. Please return **ONLY** the answer sheets to the envelope.
2. **Ask your teacher** for his or her answer sheet for **GENERAL INFORMATION ITEMS FOR TEACHERS** and **place it in the envelope.**
3. Seal the envelope.
4. **Give** the sealed envelope with the answer sheets and the Invitational Teaching Surveys to the **director of the program.**
She or he will see that the sealed envelope is mailed to me.

MEMO

To: Dental Hygiene Educators
From: Lundee Amos, R.D.H., B.S., M.Ed.
Date: Fall, 1984
Re: Invitational Teaching Study

I am an instructor in the dental hygiene program at Guilford Technical Community College in Jamestown, N.C. I appreciate your willingness to participate in this important research to help dental hygiene educators improve their teaching. This study will examine the relationship between teacher practices as measured by the Invitational Teaching Survey (ITS) and students' attitudes toward various aspects of the course. The study has been endorsed by the American Dental Hygienists' Association. This research is part of the requirements for my doctoral degree in Curriculum and Teaching at the University of North Carolina at Greensboro.

Please answer the **GENERAL INFORMATION ITEMS FOR TEACHERS** on the answer sheet provided. **Give the answer sheet to the student proctor** who will place it in the envelope with the students' answer sheets.

If at all possible, **please allow your class to use 15 minutes of class time to complete the survey.** If this is not possible the students may take the survey home to complete it, but please emphasize to the students the importance of returning the completed answer sheet at your next class meeting.

So that students' rights to confidentiality are protected, please ask a student volunteer to act as proctor. Instructions for the student proctor are on the page entitled--**INSTRUCTIONS FOR STUDENTS.**

A. If the students complete the survey in class:

1. Give the envelopes that contain the surveys, answer sheets, and #2 pencils to the student proctor.
2. Please leave the room while the survey is being completed. The proctor will notify you when the answer sheets have been returned to the envelope and sealed.
3. Please see that the proctor returns the answer sheets in the sealed envelope and the surveys to the program director. Students may keep the pencils.

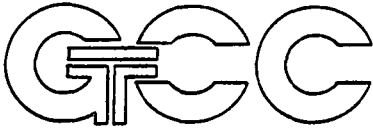
B. If the students complete the survey out-of-class:

1. Leave the classroom while the proctor distributes the surveys, answer sheets, and pencils to the students and reads the instructions.
2. At the next class meeting, please allow time for the student proctor to collect the answer sheets, place them in the envelope and seal it, and to collect the Invitational Teaching Surveys.
3. While the surveys are being collected, please remain out of the room.
4. Please see that the proctor returns the answer sheets in the sealed envelope and the Invitational Teaching Survey to the director of the program. He or she will see that the answer sheets are mailed to me.

Thank you for your cooperation!

APPENDIX L

Letter to directors and enclosures



GUILFORD TECHNICAL COMMUNITY COLLEGE
Dental Science Division
 P.O. Box 309 • Jamestown, North Carolina 27282
 (919) 292-1101 (919) 454-1126
 An Affirmative Action/Equal Opportunity Institution

October 12, 1984

Ms. Jean Stines
 Dental Hygiene Program
 Asheville-Buncombe Technical Institute
 340 Victoria Road
 Asheville, NC 28801

Dear Jean:

I am writing to request your participation in a research study that will directly benefit teachers of dental hygiene. I am an instructor in the dental hygiene program at Guilford Technical Community College in Jamestown, N. C. and a doctoral student in Curriculum and Teaching at the University of North Carolina at Greensboro. My dissertation will examine the influence of dental hygiene teacher practices on student attitudes towards various aspects of the course. The Invitational Teaching Survey (ITS) which will measure teacher practices is enclosed.

Your participation will involve all full-time dental hygiene instructors. Each full-time faculty member in your program will be asked to give the Invitational Teaching Survey (ITS) along with the background information questions to one class of students. Also, each instructor will be asked to answer the enclosed six general information items. The total time required is approximately 15 minutes. It is important that students complete the survey in class to assure independence of ratings and to assure return of all surveys. Their confidentiality will be guaranteed by having the answer sheets placed in an envelope that is sealed by a student proctor.

To indicate your willingness to participate in this study, please return the enclosed form in the self-addressed, stamped envelope as soon as possible. Data collection is scheduled for a four week period from November 5 to November 26.

All 24 participating dental hygiene programs will receive a summary of the results of the study. However, to insure confidentiality, no names of schools will be identified.

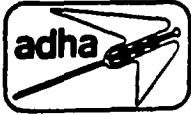
Please call me at (919) 292-1101, Ext. 2206 (work) or (919) 288-2654 (home) if you have any questions related to participation in the study.

Thank you for your help in this research.

Sincerely yours,

Lundee Amos, R.D.H., B.S., M.Ed.

LA/bcm



American Dental Hygienists' Association

444 North Michigan Avenue, Suite 3400
Chicago, Illinois 60611 (312) 440-8500

174

Cheryl Westphal RDH MS, P

Dear Colleague:

Research conducted in the area of dental hygiene education is of extreme importance to the American Dental Hygienists' Association. Quality education of dental hygienists and its resultant influence will benefit the public and the profession alike.

The American Dental Hygienists' Association has identified educational and research endeavors as a means of establishing the basis for activities which will lead to the provision of preventive care to unserved and underserved populations. The study proposed by Ms. Lundee Amos speaks directly to many professional concerns. Your influence as an educator affects the students' learning, personal commitment, and impacts directly on the concept of self. Findings from this research could be a significant factor in enhancing the learning experience.

As President of the American Dental Hygienists' Association and on behalf of the Board of Trustees, we look forward to the results of this study.

Sincerely,

Cheryl Westphal
President, ADHA

CW/mcm

Thank you for returning this completed form to me in the enclosed self-addressed, stamped envelope.

Director's Name: _____
 School: _____
 Address: _____
 City, State: _____
 Zip Code: _____
 Phone: area code (____) number (_____)

Check one:

Yes I will participate in the Invitational Teaching Study.
 No I am unwilling to participate in the Invitational Teaching Study.

If you checked yes, please answer.

How many full-time dental hygiene instructors are in your program?

How many full-time dental hygiene instructors will participate?
 _____ (I hope all will)

How many students are there in each instructor's class?
 [The survey will be administered to only one class for each instructor. The exact number of students is important so I will know how many surveys and pencils to send]

teacher #1 _____
 teacher #2 _____
 teacher #3 _____
 teacher #4 _____
 teacher #5 _____

During which of the following weeks would you like to receive the survey materials?

November 5 _____
 November 12 _____
 November 19 _____
 November 26 _____

Many thanks for your participation!!!

Lundee Amos

APPENDIX M

Demographic questions for teachers

PLEASE DO NOT WRITE ON THIS PAGE

GENERAL INFORMATION ITEMS FOR TEACHERS

Thank you for answering the following items. Please **mark your responses on the answer sheet** attached to this sheet. Use a # **two** pencil. Mark your responses firmly and cover the entire block. Erase completely any response that you change.

After you have completed all items, please **give the answer sheet to the student proctor** so he or she can place the answer sheet in the envelope with the students' answer sheets. You can dispose of this sheet.

1. TYPE OF SCHOOL:
 - a) community college
 - b) technical institute
 - c) public college or university
 - d) private college or university
 - e) other

2. STATE:
 - a) Georgia
 - b) Virginia
 - c) North Carolina
 - d) West Virginia
 - e) other

3. SEX:
 - a) female
 - b) male

4. YEARS OF TEACHING IN DENTAL HYGIENE EDUCATION:
 - a) 0-4 years
 - b) 5-9 years
 - c) 10-14 years
 - d) 15-19 years
 - e) over 20 years

5. YEARS OF CLINICAL PRACTICE OTHER THAN IN AN EDUCATIONAL SETTING:
 - a) 0-2 years
 - b) 3-5 years
 - c) 6-8 years
 - d) 9-11 years
 - e) over 11 years

6. HIGHEST LEVEL OF EDUCATION ATTAINED:
 - a) associate degree
 - b) bachelor's degree
 - c) master's degree
 - d) doctorate's degree
 - e) other

THANK YOU!!!

APPENDIX N

Memo to directors and Christmas greeting

MEMO

To: Dental Hygiene Program Directors
From: Lunde Amos, R.D.H., B.S., M.Ed.
Date: Fall 1984
Re: Invitational Teaching Study

I APPRECIATE your participation in the Invitational Teaching Study!

Please distribute the enclosed packets to each teacher.

- 1. There are two brown envelopes held together with a rubber band for each teacher.**
- 2. The teacher number and the number of students in the class are written on the small envelope which contains an instruction sheet, general information items for teachers, a single answer sheet, and a #2 pencil.**
- 3. In the larger envelope are the Invitational Teaching Surveys, the answer sheets, and # 2 pencils.**
- 4. My return address and return postage is on the large envelope. Each envelope was weighed for return postage with ONLY the student answer sheets and the one single answer sheet for the teacher enclosed.**
- 5. Please be sure that ONLY the answer sheets are in the envelope when you return them to me.**

Student proctors are given directions to return the student answer sheets and the single teacher's answer sheet to the large envelope, to seal it, and to return it to you. They are also directed to return the Invitational Teaching Surveys to you. Please discard them. Students may keep the pencils.

**MANY THANKS FOR YOUR INTEREST AND SUPPORT OF THIS RESEARCH!!
I will send you an abstract of the results.**



Merry Christmas

*Thanks for participating in the
Invitational Teaching Survey!!*

Ludell Amos

P.S. Please extend my thanks to your Students!



APPENDIX 0

Frequency Distribution of Student/Teacher Ratio

Table O1

Frequency Distribution of Student-Teacher Ratio

	Number of Students/Teacher	Number of Teachers
	33	1
	27	1
	26	2
	25	1
	22	5
	21	2
	20	2
	19	2
	17	5
	16	2
	15	5
	14	5
	13	8
	12	8
	11	8
	10	3
	9	4
	8	2
	7	3
	6	1
	5	3
	4	1
Total	<u>1045</u>	<u>74</u>

APPENDIX P**Correlation Matrix of Invitational Teaching (ITS) and
Student Affective Outcomes (SAOM)**

Table P1

**Correlation Matrix of Invitational Teaching Survey (ITS) and
Student Affective Outcome Measures (SAOM)**

Score	ITS					SAOM					
	1	2	3	4	5	6	7	8	9	10	11
1 COMMIT- MENT	1.00	.85	.73	.69	.17	.92	.52	.39	.69	.52	.66
2 CONSIDERA- TION		1.00	.72	.70	.14	.92	.52	.41	.71	.54	.67
3 COORDINATION			1.00	.81	.22	.90	.55	.47	.61	.55	.65
4 PROFICIENCY				1.00	.17	.87	.52	.46	.58	.51	.62
5 EXPECTATION					1.00	.22	.10	.11	.07	.15	.12
6 TOTAL ITS						1.00	.58	.48	.72	.59	.72
7 COURSE--SAOM							1.00	.67	.66	.68	.85
8 SUBJECT MATTER--SAOM								1.00	.51	.59	.75
9 INSTRUCTOR--SAOM									1.00	.66	.89
10 SELF-AS-LEARNER--SAOM										1.00	.87
11 TOTAL SAOM											1.00

Note. N for each correlation ranges from 975 to 1042 allowing for missing data points

APPENDIX Q

**ITS and SAOM Item to Total Correlations
from High to Low**

Table Q1

Invitational Teaching Survey (ITS) Item to Total Score
Correlations from High to Low (N = 944)

Item Number	Correlation
27	.74 <u>High</u>
28	.74
18	.71
11	.71
19	.71
1	.69
26	.68
21	.65
33	.64 <u>Moderate</u>
41	.63
31	.62
29	.62
15	.61
25	.60
42	.60
43	.59
16	.59
37	.58
10	.58
30	.58
22	.56
23	.56
7	.56
17	.54
20	.53
2	.53
38	.52
13	.52
24	.50
36	.50
12	.49
35	.47
40	.46
6	.45
5	.43
32	.43
14	.41
4	.40
34	.39 <u>Low</u>
8	.38
9	.34
3	.31
39	.20

Table Q2
Student Affective Outcome Measures (SAOM) Item to Total
Coefficient Alpha from High to Low (N=944)

Item Number	Correlation
63	.71 <u>High</u>
54	.69
61	.69
56	.67
55	.65
62	.64 <u>Moderate</u>
49	.64
59	.64
58	.63
60	.60
53	.57
45	.56
57	.56
50	.52
52	.49
46	.48
44	.39 <u>Low</u>
51	.33
47	.33
48	.25

APPENDIX R

Normative Data for ITS (74 dental hygiene instructors)

Table R1

Scores for ITSTotal Score for the ITS

Score	High	Moderate	Low
Range	187-210	162-186	43-161

Scores for Professionally and Personally Subscores

Subscore	High	Moderate	Low
1. Pro (21 items)	97-105	83-104	21-82
2. Pe (22 items)	96-105	82-95	22-81

Note. N = 74 dental hygiene teachers

High = top quartile; Moderate = between top quartile and bottom quartile; Low = bottom quartile

Table R2

Scores for Five Subscores of ITS

Subscore	High	Moderate	Low
1. COMMITMENT (11 items)	47-55	40-46	11-39
2. CONSIDERATION (11 items)	49-55	42-48	11-41
3. COORDINATION (10 items)	43-50	37-42	10-36
4. PROFICIENCY (10 items)	45-50	39-44	10-38
5. EXPECTATION (1 item)	5	4	1-3
Total	187-210	162-186	43-161

Note. N = 74 dental hygiene teachers

High = top quartile; Moderate = between top quartile and bottom quartile; Low = bottom quartile

Table R3

Summary of Mean Scores of Items of ITS for Personally InvitingSubscore-- COMMITMENT

Item	Mean	Standard Deviation
Disclosing		
8	3.450	0.650
33	3.821	0.673
32	3.724	0.546
Investing		
37	3.840	0.578
4	4.326	0.618
6	4.218	0.565
Supporting		
27	3.787	0.738
38	4.269	0.463
28	3.813	0.723
22	3.486	0.668
31	4.025	0.673

Note. N = 74 teachers

Table R4

Summary of Mean Scores of Items of
ITS for Personally Inviting Subscore--CONSIDERATION

Item	Mean	Standard Deviation
Attending		
19	3.958	0.713
17	4.087	0.705
30	4.361	0.498
34	3.794	0.528
Affirming		
15	3.561	0.670
2	4.211	0.605
18	4.034	0.645
21	4.055	0.678
Cheering		
1	3.935	0.634
26	4.188	0.601
23	4.204	0.622

Note. N = 74 teachers

Table R5

Summary of Mean Scores of Items ofITS for Professionally Inviting Subscore--COORDINATION

Item	Mean	Standard Deviation
Clarifying		
13	4.148	0.575
41	3.918	0.553
25	3.748	0.596
20	3.880	0.582
Informing		
14	4.028	0.549
40	4.079	0.471
43	4.225	0.570
11	3.890	0.617
10	3.605	0.673
3	4.353	0.439

Note. N = 74 teachers

Table R6

Summary of Mean Scores of Items Of ITS
for Professionally Inviting Subscore--PROFICIENCY

Item	Mean	Standard Deviation
Managing		
36	4.189	0.560
35	4.314	0.498
7	4.021	0.557
16	4.363	0.434
29	4.051	0.549
Relying		
9	4.485	0.516
5	4.457	0.454
42	4.179	0.515
12	4.044	0.613
24	3.989	0.762

Note. N = 74 teachers

APPENDIX S

Normative Data for SAOM (74 dental hygiene instructors)

Table S1

Average Mean and Standard Deviation of SAOM Subscores and Total

Subscore	Mean	Standard Deviation
COURSE		
I (3 items)	9.400	1.130
SUBJECT MATTER		
II (3 items)	8.580	1.165
INSTRUCTOR		
III (7 items)	21.702	3.021
SELF-AS-LEARNER		
IV (7 items)	22.447	1.700
TOTAL (20 items)	62.113	6.362

Note. N = 74 Teachers

Table S2

Scores for Total Score and Four Subscores of SAOM

Subscore	High	Moderate	Low
1. COURSE (3 items)	10-12	8-9	3-7
2. SUBJECT MATTER (3 items)	9-12	7-8	3-6
3. INSTRUCTOR (7 items)	24-28	20-23	7-19
4. SELF-AS- LEARNER (7 items)	23-28	21-22	7-20
TOTAL SCORE	66-80	59-65	20-58

Note. N = 74; High = top quartile, Moderate = between top and bottom quartile; Low = bottom quartile

APPENDIX T

Scoring Instructions for ITS and SAOM

SCORING THE ITS
(Hand Scoring for a Small Class).

NOTE: To obtain the SCORE, divide the RAW DATA TOTAL by the number of students taking the test.

POSITIVE ITEMS	A	B	C	D	E	TOTAL	NEGATIVE ITEMS	A	B	C	D	E	TOTAL
1	1	2	3	4	5		2	5	4	3	2	1	
4							3						
7							4						
8							9						
10							12						
11							13						
14													
15													
16							17						
18							19						
							20						
22							21						
24							23						
25													
26													
27													
28													
29													
30							31						
							32						
33													
34							35						
							36						
37							38						
39							40						
41													
42							43						
TOTAL							TOTAL						

RAW DATA FOR POSITIVE ITS ITEMS

RAW DATA FOR NEGATIVE ITS ITEMS

SCORING THE ITS (Continued)
 (Invitational Teaching Survey -- Amos, Purkey and Tobias, 1984)

SCORING PERSONALLY INVITING ITEMS of the ITS
 (Hand Scoring for a Small Class)

Directions: To obtain your score for **COMMITMENT**, bring the RAW DATA TOTALS (by item) from "SCORING THE ITS" and enter in the appropriate blanks:

- 8. _____
- 32. _____
- 33. _____
- 22. _____
- 27. _____
- 29. _____
- 31. _____
- 38. _____
- 4. _____
- 6. _____
- 37. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = **COMMITMENT SCORE** _____

Directions: To obtain your score for **CONSIDERATION**, bring the RAW DATA TOTALS (by item) from "SCORING THE ITS" and enter in the appropriate blanks:

- 17. _____
- 19. _____
- 30. _____
- 34. _____
- 2. _____
- 15. _____
- 18. _____
- 21. _____
- 1. _____
- 23. _____
- 24. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = **CONSIDERATION SCORE** _____

COMMITMENT SCORE _____ plus **CONSIDERATION SCORE** _____ equals **PERSONALLY INVITING SCORE** _____.

SCORING PROFESSIONALLY INVITING ITEMS of the ITS
 (Hand Scoring for a Small Class)

Directions: To obtain your score for **COORDINATION**, bring RAW DATA TOTALS (by item) from "SCORING THE ITS" and enter in the appropriate blanks:

- 13. _____
- 20. _____
- 25. _____
- 41. _____
- 3. _____
- 10. _____
- 11. _____
- 14. _____
- 40. _____
- 43. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = **COORDINATION SCORE** _____

Directions: To obtain your score for **PROFICIENCY**, bring RAW DATA TOTALS (by item) from "SCORING THE ITS" and enter in the appropriate blanks:

- 7. _____
- 14. _____
- 29. _____
- 35. _____
- 36. _____
- 9. _____
- 5. _____
- 12. _____
- 24. _____
- 42. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = **PROFICIENCY SCORE** _____

***Bring RAW DATA TOTAL for item 39 (**EXPECTATION**) and insert in this blank _____.
 DIVIDED BY # OF STUDENTS _____
 = **EXPECTATION SCORE** _____.

EXPECTATION SCORE _____ plus **COORDINATION SCORE** _____ plus **PROFICIENCY SCORE** _____ equals your **PROFESSIONALLY INVITING SCORE** _____.

PERSONALLY INVITING SCORE _____
 plus **PROFESSIONALLY INVITING SCORE** _____
 equals **TOTAL ITS SCORE** _____

SCORING THE SAOM
 (Hand Scoring for a Small Class).
RAW DATA TOTALS

NEGATIVE ITEMS	A	B	C	D	TOTAL	POSITIVE ITEMS	A	B	C	D	TOTAL
	1	2	3	4			4	3	2	1	
44						45					
46											
47						48					
49						50					
51											
52											
53						54					
						55					
56						57					
						58					
						59					
						60					
61											
62						63					
TOTAL						TOTAL					

RAW DATA FOR NEGATIVE ITEMS OF THE SAOM | RAW DATA FOR THE POSITIVE ITEMS OF THE SAOM

NOTE: To obtain the SCORE, divide the RAW DATA TOTAL by the number of students taking the test.

SCORING THE SAOM (Continued)
 (Student Affective Outcome Measures -- Amos, 1984)

Directions: To obtain your score for COURSE, bring RAW DATA TOTALS (by item) from "SCORING THE SAOM" sheet and enter in the appropriate blanks:

45. _____
 49. _____
 55. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = COURSE SCORE

Directions: To obtain your score for SUBJECT MATTER, bring RAW DATA TOTALS (by item) from "SCORING THE SAOM" sheet and enter in the appropriate blanks:

50. _____
 52. _____
 59. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = SUBJECT MATTER SCORE

Directions: To obtain your score for INSTRUCTOR, bring RAW DATA TOTALS (by item) from "SCORING THE SAOM" and enter in the appropriate blanks:

51. _____
 53. _____
 54. _____
 56. _____
 60. _____
 62. _____
 63. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = INSTRUCTOR SCORE

Directions: To obtain your score for SELF-AS-LEARNER, bring RAW DATA TOTALS (by item) from "SCORING THE SAOM" and enter in the appropriate blanks:

44. _____
 46. _____
 47. _____
 48. _____
 57. _____
 58. _____
 61. _____

RAW TOTAL _____
 DIVIDED BY # OF STUDENTS _____
 = SELF-AS-LEARNER SCORE

COURSE SCORE _____
 plus SUBJECT MATTER SCORE _____
 plus INSTRUCTOR SCORE _____
 plus SELF-AS-LEARNER SCORE _____
 equals TOTAL STUDENT AFFECTIVE OUTCOME MEASURES (SAOM) SCORE _____