An Evaluation of the Workshop as a Learning and Motivational Experience for Adults

Eugene Edwin Paulausky
Loyola University Chicago

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AN EVALUATION OF THE WORKSHOP
AS A LEARNING AND MOTIVATIONAL
EXPERIENCE FOR ADULTS

by

Eugene E. Paulauskyn

A Dissertation Submitted to the Faculty of the
Graduate School of Loyola University in
Partial Fulfillment of the Require-
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AN EVALUATION OF THE WORKSHOP AS A LEARNING AND MOTIVATIONAL EXPERIENCE FOR ADULTS

Eugene E. Paulausky
Loyola University

In this study the workshop method of teaching selected adults in special subject matter areas was evaluated. There were two experimental groups: one consisting of 15 dental assisting educators who attended the Loyola American Dental Assistants Association's Teacher Education Workshops and the other consisting of 15 similar educators who attended the Boston ADAA Teachers Education Workshop. The three control groups were educators who did not attend an ADAA Teacher Education Conference and consisted of: 15 dental assisting educators selected randomly on a nationwide basis, 15 public school teachers and 15 public school administrators.

Pre and post tests were used to assess the learning of the workshop participants. Test items were written directly from the workshop participants' objectives. A post-test only comparison of the five groups was made to determine the value of the workshop.

Two null hypotheses were tested. The first stated: there is no significant difference in the means of the pre and post test results of the workshop participants. The second stated: there is no significant difference in the means of the post test results of the experimental groups and the control groups. The .05 level of significance was used to reject the hypotheses in this study.

A two way analysis of variance (with repeated measure on one factor) was used to test the first hypothesis. The analysis showed a significant
difference between pre and post test scores of the workshop participants at the .05 level, thus, rejecting the null hypothesis.

To test the second hypothesis, a one way analysis of variance was used. The second hypothesis was rejected at the .05 level of significance.

Other methods used to evaluate the workshop included: written evaluation by the participants, observation and discussion with the participants by the writer. These procedures helped provide a more comprehensive evaluation of the workshop activities.

To determine the motivational influence of the workshops, questionnaires were sent to all the participants in the study. These questionnaires showed that the workshop participants engaged in teacher training activities more than those in the three control groups.

This study showed that the workshop was an effective means to teach adults. The writer does suggest, however, that efforts be made to evaluate adult education. The review of adult literature undertaken in this study pointed out the need for programs to instruct adults. According to writers in this field, the need for adult education will continue and more research in adult teaching methods is needed.
VITA

Eugene Paulausky was born February 5, 1930, and resides in Waukegan, Illinois. Formal preparation consists of a Bachelor of Arts degree from Lake Forest College, 1954, a Master of Arts degree from DePaul University, 1961, and thirty hours of post graduate work in education. Presently he is pursuing his doctorate at Loyola University.

Experiential background includes: twelve years of teaching at the junior high school and high school levels, two years as director of education for a national association and one year as assistant superintendent in an elementary school district. Various consulting duties and workshop responsibilities were performed while acting in the capacity of Director of Education for the American Dental Assistants Association. Projects completed included: the development of a national consulting service for the American Dental Assistants Association and a national aptitude test to screen potentially successful dental assisting students. The writer is continuing in the position of assistant superintendent for School District 15 in McHenry, Illinois.
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Recognition for assistance is extended to the five teacher groups involved in this study. They responded willingly to my many requests. A grateful acknowledgment is meant for Dr. Raynard Dooley. His assistance with the statistical aspect of the study has been invaluable.

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CHAPTER I

THE NATURE AND SCOPE OF THIS STUDY

The purpose of this study is: (1) to ascertain the effectiveness of the workshop in adult learning and (2) to determine the influence of the workshop as a means of motivating adults to pursue topics which were part of the workshop experience.

Five groups of adult educators were involved. The two experimental groups consisted of 15 dental assisting educators who attended the Loyola American Dental Assistants Association's Teacher Education Workshop and 15 dental assisting teachers who attended the Boston ADAA Teacher Education Workshop. The three control groups, who did not attend an ADAA Teacher Education Workshop, consisted of 15 dental assisting instructors randomly selected on a nationwide basis, 15 public school teachers (certified to teach in Illinois), and 15 public school administrators (certified to administer in Illinois).

Two null hypotheses were tested:

1. There is no significant difference between pre and post test means of participants of the Loyola and Boston ADAA Teacher Education Workshops.

2. There is no significant difference among the post-test means of the participants of the Loyola and Boston ADAA Teacher Education Conference and the three control groups of educators.

To test the first null hypothesis a two way analysis of variance (with repeated measure on one factor) was used. The two main effects in the analysis were location and retesting. The first main effect, location, would determine
if there was a significant difference in the two workshop groups. The second main effect, retesting, would determine whether or not the difference of the pre and post test scores of the thirty participants was significant.

To test the second null hypothesis, a one way analysis of variance was used. The .05 level of significance was used to reject the hypotheses in this study.¹

To show the effectiveness of the workshop as a means of motivating adults, questionnaires were completed by the experimental groups and the control groups. The results were used to judge the influence of the workshop in motivating the participants to continue learning topics relevant to the workshop presentations.

This study seems meaningful in our constantly changing society. Human retooling will be needed to a much greater degree, and effective means to bring this about will become increasingly important in the future. There are few occupations today (1972) which are not threatened by the tidal wave of change. This change has resulted in modification of previous occupations and has even made some obsolete. For example the elevator operator is rarely needed in today's modern automatically controlled lifts. This is a phenomenon peculiar to the last several decades. Not too long ago, it was possible to prepare for

a life's work and be reasonably assured of continuing in that pursuit until retirement.

What is unique about today's problem of job security is that all employee levels (skilled, unskilled and professionals) are swelling the unemployment ranks. Executives, engineers, managers, supervisors and blue collared workers are being dismissed. High salaried executives ($15,000.00 and up) are let go after twenty plus years with a company. Because of their tenure and high salary, it is difficult for them to gain re-employment.¹

Educators are threatened by today's labor market to some degree. There is a surplus of teachers in many areas of the country, and school districts facing financial crisis are decreasing teaching staffs in spite of increasing pupil population. According to a county superintendent, nearly every school district in his county is reducing teaching staff while student enrollment continues to grow.²

Teachers are faced with new problems about instruction: individual vs. group instruction, open vs. traditional classroom, performance contracts, the voucher system and many more. Articles in popular educational magazines abound with theories about better ways to prepare students for the world of tomorrow. Multi-unit elementary schools and individually guided instruction are being considered as promising education programs today.³ Decisions concerning one or


²James Flood, "Teachers' Jobs not Enough to Go Around," The Waukegan---News-Sun, June 2, 1972, p. 1C

more of these teaching methods will have to be made by some educators. These
decisions will rest on teachers of the future. Their ability to make prudent
decisions will be influenced by their previous professional preparation and
their efforts to keep current through continuing education.

The workshop method of in-service teacher training is not new. Investiga-
tion of the public school system, both while a teacher and an administrator,
showed that the workshop was used extensively to effect educational change.
The workshop has the advantage of application, practice, evaluation and
immediate feedback which makes it, in the writer's opinion, more effective than
methods which do not provide these essentials such as the correspondence
approach. If one of the responsibilities of the future is retooling adults,
then it would be well to plan and use methods on which there is a background of
planning and experience and to seek to prove their worth.

There is a movement in the public health field to up-date teaching
practices through in-service or workshop programs. To obtain certification or
a license to administer public health services is somewhat different from certi-
fication granted public school teachers. The health occupations require their
personnel to pass national and state board examinations. There is also a
serious effort by this group to effect continual education in order to keep
those in practice up to date on the latest methods and procedures. Those
engaged in health occupations also try to insure the public against malpractice
by members of their profession who make constant errors in diagnosing and treating
patients. All these efforts require adult education programs.

The search for tested adult instructional methods which yield evidence of
success is continual in the public health field. A method which showed the
successful training of teachers would be useful to the state and national boards of examiners. The approach used and the evaluation instrument which was employed could be given serious consideration by those boards in their efforts to include a teacher assessment and preparation section to their examination for those wishing to become instructors in the health fields.
CHAPTER II

REVIEW OF ADULT EDUCATION LITERATURE

Background

The dimension of those activities categorized as adult education staggers the imagination. In order to establish some guidelines to present this subject a definition was sought. This writer chose the definition of adult education given by Lyman Bryson (1936): "We can define adult education as including all the activities with education purpose that are carried on by people engaged in the ordinary business of life."\(^1\) Although Bryson's definition is some thirty-six years old, it still seems adequate today.

Origins of Adult Education

According to anthropologists adult education had its beginning in the Neolithic era.\(^2\) This education was based on the learning demands required by those residing in a geographic area. Kluckhohn (1949) explained the cultural influence on man when he wrote: "...Each specific culture constituted a kind of blueprint for all life's activities."\(^3\) It was pointed out that it is the

\(^1\)Lyman Bryson, Adult Education (Chicago: American Book Company, 1936), pp. 3-4.
adult who invents, innovates and changes culture patterns within the confines of his milieu. This could conceivably substantiate the need for lifelong education and learning.¹

The adult education movement in the United States was believed to have begun in colonial times. Grattan (1955) suggested that the New England town meeting was the beginning of adult education activity. He was quick to acknowledge that religious denominations contributed to early adult education in America. As in England one of the main reasons to promote literacy in the United States during this early period was to provide men with a way to their own salvation through reading the Bible.²

Individual activity which promoted education was evident during colonial times. Benjamin Franklin was a leader for this cause. In 1744 he began clubs (first named Leather Apron and then Junto) which engaged in discussions and writings. A wide variety of topics was covered. Van Doren (1938), a Franklin biographer, described Franklin's contribution to these club meetings as considerable and, at times, not above personal gains.³

Second only to Benjamin Franklin in promoting an enlightened citizenry was Thomas Jefferson. Like Franklin, Jefferson continued self-education throughout his life. Perhaps his Notes on the State of Virginia best express

¹Grattan, p. 22.
²Ibid., p. 139.
³Carl Van Doren, Benjamin Franklin (New York: The Viking Press, 1938), pp. 73-76.
his concern for education. In the section "On the Law To Diffuse Knowledge More Generally Through the Mass of the People" Jefferson wrote:

"...Every government degenerates when trusted to the rulers of the people alone. The people themselves therefore are the only safe depositories. And to render even them safe their minds must be improved to a certain degree. This indeed is not all that is necessary, though it is essentially necessary. An amendment of our constitution must come in aid of public education..."

The American Revolution slowed the strides of adult education in the new nation, but it did not diminish them. The new leaders realized that in order for democracy to function, the public needed certain skills which would permit it to make appropriate decisions concerning government and its effect on the lives of the people. George Washington was very concerned about promoting an enlightened citizenry. In his "Farewell Address" he expressed this concern:

"...Promote, then, as an object of primary importance institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion it is essential that public opinion should be enlightened..."

Movements to keep the public enlightened occurred sporadically. Bode (1956) described one such movement, the Lyceum ("Lyceum" was the name of the garden where Aristotle paced back and forth while delivering lectures on his philosophy.) The Lyceum movement in American was greatly influenced by one man, Josiah Holbrook, who was interested in science and the teaching of science.

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He devised a national structure for Lyceums, which were to be developed at centers in different parts of the country. A range of topics was taught at these centers. The movement began in the 1820's, but interest in it diminished after the Civil War.\(^1\)

In studying early adult education in America one cannot discount the influence of the public libraries. Grattan provides two letters expressing the concern for a public library for the city of Boston. The first, sent by a prominent Boston citizen on June 7, 1851 to the Mayor of Boston, stated "...The first principles of popular government require that the means of education should as far as possible, be equally within the reach of the whole population."\(^2\) The second letter written by a noted member of Boston society on July 14, 1851, expressed concern for providing adults with a method to continue learning:

> It has seemed to me, for many years, that such a free public library if adopted to the wants of our people, would be the crowning glory of our public schools. But I think it important that it should be adopted to our peculiar character: that is, that it should come at the end of our free instruction, and be fitted to continue and increase the effects of that system by the self-culture that results from reading.\(^3\)

Another early adult education plan was the Chautauqua Movement. Although this movement was religiously (Methodist) inspired, the activities covered a wide variety of subjects. The leader of this movement was Bishop John Heyle

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\(^1\)Ibid., pp. 10-16.


\(^3\)Ibid., p. 45.
Education once the peculiar privilege of the few, must in our best earthly estate become the valued possession of the many...¹

In mature life, beyond the limits of the usual school period, the intellect is at best for purposes of reading, reflection, and production. While training of the schools may discipline the juvenile mind, and thus give it an advantage as its powers mature, the discipline of everyday life, in solving problems of existence, support, and business, gives a certain advantage to the so called uneducated mind during the middle period of life. Between the ages of twenty and eighty lie a person's best intellectual opportunities: and he needs direction, encouragement, and assistance in order to use them effectively.²

Another early adult education program was the university extension system. Rutgers University began university extension programs as early as 1891. This was the year that Rutgers formally established its Extension Department, and the movement gained momentum until 1901. It declined because of the deplorable travel conditions at the time. Instructors had difficulty reaching centers where the extension programs were being offered.³

Modern adult education is said to have begun in the 1920's.⁴ The National Education Association created the Department of Adult Education in 1924. The American Association for Adult Education was founded in 1926; some psychological studies concerning adults and learning were conducted during this period.⁵


²Ibid., pp. 542-543.


⁵Ibid., p. 225-226.
Probably the greatest stimulus for the adult education movement was Thorndike's study, *Adult Education*. This two year study of adult learning was conducted to dispel the myths associated with age and one's ability to learn. Thorndike established that learning faculties are not seriously hampered by age. He compared learners of different ages and different intellectual abilities and concluded:

> In general, nobody under forty-five should restrain himself from trying anything because of a belief or fear that he is too old to be able to learn it. Nor should he use that fear as an excuse for not learning anything which he ought to learn...

Thorndike was also concerned with the re-education of adults. He suggested that industries and employers would do well to re-educate an employee whose job became obsolete rather than dismiss him. He felt that employees could learn whatever was needed, provided that efforts to instruct them were made.

Adult education researchers have tried to piece together a national picture of adult education activities. In an effort to organize and report these activities, the Carnegie Foundation helped establish the American Association for Adult Education. Morse Cartwright was appointed as director of this new association. He admitted, "Before the month of June, 1924, the term

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2Ibid., p. 127.

3Ibid., p. 180.
"Adult Education" was not used in America."¹ In 1929 The Journal of Adult Education began quarterly publication. The purpose of this journal was to inform the Association and the general public on adult education in this country. Concerning the adult education movement Cartwright wrote:

Every recruit to the idea that education in maturity can recreate and provide new standards of value is a loss to the all-too-evident philosophy of the past mad years wherein the superficiality of "modern civilization"—from money making to entertainment—have controlled our existence. The way is opening to every man and woman in America to make his intellectual future safe, enjoyable and abundant.²

Democracy and Adult Education

Louis Lowy (1955) stated that in order for a democracy to survive, adults must continue to learn. He felt that through group work individual needs such as accomplishment and recognition were met. Group situations provided an opportunity for adults to communicate with each other, an important function for normal, healthy people.³

William C. Hallenbeck (1964) wrote on this subject "Adult education's first concern will always be helping individual adults to learn, to grow, to increase their capacities, to attain a richer and fuller life in their own

²Ibid., p. 208.
terms." He suggested that man is shaped by his surroundings and his adaptation to them. Of responsibility he wrote: "Adults who bear the responsibilities of society in which they dwell must be repeatedly re-equipped to meet these responsibilities." He felt that religious, political and social leaders attempt to re-educate adults in an effort to accomplish tasks, set priorities or bring about change.

Hallenbeck reminds us that every society demands continuing education to provide for changing roles. Continuing education is even more important in today's society than it was a decade ago, because invention and technology are accelerating change in nearly every aspect of life. He feels that continuing education is needed to provide adults with a way to live a meaningful life.

Kidd (1959) suggested that the adult learner was different from the non-adult learner in many respects:

(1) The adult learner does not have the same concept of the

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2Ibid., p. 5.

3Ibid., p. 6.
"right answer" as the non-adult. Many times the answer provided by the instructor or the book does not satisfy the mature student. This is not true of the non-adult, who often accepts the answer given by the teacher or the one written in the book:

(2) The solution to adult problems can and often do affect other people. Because other people will be affected, the adult must consider his decision carefully:

(3) The values for adult students may be entirely different from those held by the instructor. This difference could lead to conflict but does not necessarily have to. If the adult educator is aware of this difference, both the mature student and the instructor could gain from such an experience.

Paul Bergevin (1967) described adult education as an important factor in any society and a necessity in a democratic society. He wrote:

Adult education is not a fad or a pastime of an affluent society. It is an ingredient so important to a social order struggling to be free that the success of the order is related directly to what the adult knows and how he practices what he knows.2

Bergevin considered all the experiences of adults educational, since all experiences modify an individual's behavior. This author explained that adult behavior can and does change both desirably or undesirably. Therefore, Bergevin felt that society must provide continuous opportunities for adults to have socially acceptable experiences.3

Contemporary innovations in adult education are evident. Recently The Chicago Sun Times newspaper printed an article entitled "Newspapers to

3Ibid., p. 9.
Help Mass Education Plan." The article stated that the federal government will fund the University of San Diego to design a media course. The course will be intended for three groups: (1) the casual reader, (2) the reader seeking information in areas of interest, and (3) the reader seeking college credit. The first course of this nature will have 20 written lectures of about 1400 words each. Distinguished educators around the nation will write these lectures on "the future of man."  

Catholic adult education activities are also evident. Anthony Salamone, writing about Catholic adult education, discussed the six factors he considered of primary importance in structuring adult education programs:

1. Identify needs
2. Involve the community
3. Find a staff
4. Finance the program
5. Handle administrative concerns
6. Promote the program.

Salamone suggests that adult education programs could provide the church with a means to inform adults of the kind of life Catholicism prefers. He does caution, however, that the success of these programs depends on the needs of the group for whom they are intended. He also maintains that these programs should provide ways for those involved to assess their own spiritual, intellectual and social needs, as well as guide them toward church desired goals.  


3Ibid., pp. 77-80.
CHAPTER III

STRUCTURING THE WORKSHOP

The ADAA Teacher Conference program was developed around the needs of the dental assisting educator. The problem confronting the dental assisting instructors was, in part, due to circumstances which have caused the dental profession to change some of its ways of providing dental health care service.¹

Demands by the general public for more dental health care service have caused the leaders in the dental profession to evaluate their past and present training programs. Two highly respected researchers in the dental profession, P. E. Hammons, D.D.S. and H. C. Jamison, D.D.S., cited a disparity between increasing demands for dental health care service and the dental profession's ability to meet these demands. They pointed out that in other westernized countries, this same situation has drastically altered the practice of dentistry.²

In an attempt to solve its own problems, the dental profession is considering granting the dental auxiliaries expanded responsibilities. These

¹Information concerned with structuring ADAA Teacher Conferences and Workshops was the result of experience as the ADAA Director of Education. It was the Director of Education's responsibility to structure, administrate, participate (as an instructor) and finance these workshops.

new functions of dental auxiliaries would increase dental health care service and partially satisfy the public demand for an increase in this service.

The dental auxiliaries are made up of three groups of which the dental assistants are the most numerous. Because of their greater number and the nature of their work the dental profession has been granting them new responsibilities. But, these new duties require special training. Another problem with using this dental auxiliary to satisfy the public demand for more dental health care service is that the dental assistants themselves are facing a manpower shortage. In 1965 a Public Health Service study showed that 84,300 dental assistants were active and that the projected number of the dental assistants needed in 1980 would be 220,000.

The American Dental Assistants Association is trying to help meet the needs of the dental profession by recruiting more dental assistants into the occupation and by investigating and promoting new and varied dental assisting training programs. In 1970 the American Dental Assistants Association surveyed its 14,000 active members to determine how they received their training. The respondents (2,910) or about 20% of the active membership revealed that 33% received their training on the job, 31% through the ADAA 104 Hour Course, 5% by correspondence, 5% from proprietary (private) schools and 18% from 1 or 2

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year accredited dental assisting training programs. 1

The survey results could also be applied to the dental assisting educators who received their training in much the same way as the dental assistant. Many times they left the dentist's office and immediately began teaching. These educators had no recourse or time to become qualified teachers. They had only limited places and programs which are designed to meet their particular teaching needs.

For the present study a search for previous surveys to assess the needs of the dental assisting teacher was begun. One comprehensive study which dealt with assessing dental assisting teacher needs was presented in a 1965 report by John C. Brauer, D.D.S. and Roger Barton, D.D.S. This report showed that dental educators lacked preparation in the following areas:

1. Deriving course and student objectives
2. Teaching methods and teaching procedures
3. Evaluation techniques (program and student)
4. Instruction in clinical and laboratory procedures
5. Interpersonal relations
6. Dental office management.

To use the results of this 1965 report in the present study was to assume that

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1 "Survey to Determine Dental Assisting Training Background" in ADAA Journal The Dental Assistant, Vol 34, No. 11 (November, 1970).

dental assisting educators' needs in 1970 were the same as those in 1965. For a more realistic assessment of needs, a 1970 questionnaire for dental assisting program directors was developed and sent to directors in the Midwest and New England, where American Dental Assistants Association Teacher Education workshops were to be held.¹

The 1965 survey and the 1970 questionnaire results were used to formulate the workshop activities. The workshop would provide instruction in the following areas:

1. Writing objectives (both course objectives and student performance objectives)
2. Teaching methodologies (multiple approach)
3. Evaluating procedures (student and Program)
4. Using proper laboratory and clinical procedures
5. Teaching ways to improve interpersonal relations.²

The decision to use the workshop method of instruction was based on the past training experiences of dental assisting teachers. They had been instructed in workshop sessions on many occasions and were familiar with this teaching method. Also, the 1965 report indicated that the participants of the workshop made gains (in separate subject matter areas presented.) This experience as revealed by pre and post test results. This would tend to support the fact that the workshop was an effective means of preparing the dental assisting educators.

¹The tabulated survey results sent to dental assisting program directors can be found in Appendix A.

The emphasis on continued education is prevalent among Association members and one of the objectives of the Association is to promote the dental assistant profession and support the dental profession through continued study. For example, nearly all the dental assisting teachers are certified by the American Dental Assistants Association's Certifying Board. Most of these instructors hold "current certification" which requires that they take 12 hours of instruction each year. These hours have to be in the field of dentistry or related to teaching. Instruction for many of these activities is provided in workshop-like settings.

To help assure a meaningful program of instruction, the workshop in this study was structured using the following guidelines.

1. The program was based on the needs of those for whom it was intended.
2. Course and student objectives were developed from the needs of the group to be instructed.
3. Evaluation procedures included all facets of the workshop.
4. The participants were familiar with receiving instruction and information by the workshop method.

1ADAA Continuing Education Course Inventory (Chicago: ADAA Department of Education, 1970-71).
2Summary of ADAA Teacher Education Workshop presentations and material, Appendix B.
CHAPTER IV

CONSTRUCTING THE TEST

In order to determine the effectiveness of the workshop as a means of teaching adults, particular attention was given to testing, done by a pre and post test. The test constructed was designed to measure proficiency in certain aspects of professional teacher preparation, viz., deriving course and student objectives, utilizing multiple teaching methodologies, evaluating programs and student performance, and informing participants on inter-personal relations with individuals and groups.

The test items were written directly from the workshop participants' objectives. The decision to write test items from the workshop participants' objectives was greatly influenced by such educational leaders as Benjamin Bloom (Taxonomy: Cognitive Domain), Ralph Tyler (Basic Principles of Curriculum and Instruction), and Robert Mager (Preparing Instructional Objectives). These authors stress the importance of developing clearly defined objectives.

Robert Mager stresses that objectives, properly written, clarify the task or purpose of the activity, as well as describe the condition and acceptable performance expected from the student. He strongly urges that the

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1ADAA Teacher Education Conferences, pp. 2-3.

instructor have clearly defined goals before expecting the learner to be responsible for what it is he must know or do. He also urges that objectives be written so that anyone can interpret what the writer intends. He suggests having someone else read the stated objectives to determine if the author's intent is clearly understood. The objectives written for the participants were discussed among the other three instructors and with the participants. This discussion indicated that the objectives were understood as the author intended.

An attempt to require the examinees to use different cognitive levels in answering the test items was made. For this purpose Bloom's Taxonomy of Educational Objectives: Cognitive Domain was referred to as a guide. Bloom classifies and categorizes educational objectives into a hierarchy.

1. Knowledge level (lowest)
2. Comprehension level
3. Application level
4. Analysis level
5. Synthesis level
6. Evaluation level (highest)

The first three categories in the cognitive domain most closely relate to and include the stated purpose of the workshop. Therefore, test items were written which would require the participants to think in terms of the first three cognitive levels (knowledge, comprehension and application) to answer the items.

1 Ibid., 4.
In order to reduce the effect of memory on test-retest measures an alternate post-test form of the pre-test was written. This resulted in one form of the test being given as a pre-test and another form of the test being given as a post-test. Nunnally suggests that reliability measures from a test-retest situation are often not meaningful. He states that memory tends to make the test appear to correlate higher than is actually the case. This is especially true when retesting occurs shortly after the original testing.¹

Guidelines were established for developing and administering the pre and post test. Test items were carefully written from the participants' objectives and varying cognitive levels needed to answer the items correctly were attempted using Bloom's Taxonomy: Cognitive Domain as a guide. In addition test items were written paying close attention to item stems and distractors as suggested by Nunnally and Cronbach. By this method of test construction, the test in this study should have "face validity."²


*Pre and post test: See Appendix E.
CHAPTER V

EXPLANATION OF THE EXPERIMENTAL PROCESS

The purpose of the testing was to determine whether or not the workshop was an effective means of communicating to adults. The participants were evaluated by a pre and post test. Table 1 shows the comparison of the pre and post test scores of those who attended the two ADAA Teacher Education Workshops. The reader may note that Table 1 shows that the workshop participants did seem to learn from this experience as evidenced by their higher scores on the post-test.

A comparison of the educational backgrounds of the five groups included in this study is provided. This comparison is intended to show that no educational advantage was afforded the experimental groups. Quite the contrary is true. It is shown in Table 2 that the dental assisting educators, both the experimental groups and the dental assisting teachers who did not attend a workshop, have less formal education than the public school teachers or the public school administrators.

Current psychological testing recognizes four types of validity, content, concurrent, construct and predictive. The validity of the test instrument in this study was based on content. The manner of developing content validity
TABLE 1

COMPARISON OF PRE AND POST-TEST SCORES OF DENTAL ASSISTING TEACHERS WHO ATTENDED THE ALA.A. TEACHER WORKSHOPS

<table>
<thead>
<tr>
<th>Identification Number</th>
<th>Loyola Workshop Pre Test</th>
<th>Loyola Workshop Post Test</th>
<th>Boston Workshop Pre Test</th>
<th>Boston Workshop Post Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>20</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>19</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>20</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>16</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>23</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>16</td>
<td>22</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>14</td>
<td>19</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>18</td>
<td>22</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>9</td>
<td>11</td>
<td>20</td>
<td>25</td>
<td>20*</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>21</td>
<td>19</td>
<td>17*</td>
</tr>
<tr>
<td>11</td>
<td>13</td>
<td>22</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>12</td>
<td>19</td>
<td>19</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>15</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>14</td>
<td>10</td>
<td>15</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>15</td>
<td>19</td>
<td>15</td>
<td>16</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Scores from ALAA Teacher Conference Pre and Post-Test material developed by ALAA Department of Education, 1971.

*It is the writer's opinion that a lower post test score could have resulted from: "over thinking", "misinterpreting the item" or errors due to haste.
<table>
<thead>
<tr>
<th>Education</th>
<th>Loyola</th>
<th>Boston</th>
<th>Dental Assisting Teachers</th>
<th>Public School Teachers</th>
<th>Educational Experts (School Administrators)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not Attending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>5</td>
<td>6</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Junior College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year</td>
<td>2</td>
<td>2</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Two Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Year</td>
<td>1</td>
<td>3</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Two Years</td>
<td>3</td>
<td>1</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Three Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four Years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master's</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sixth Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Responses</td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: ADAA Pre and Post Test Material

*Not all the participant's filled out this section.*
for the test was described in Chapter III.

Validity and reliability studies usually begin with item analysis. 1 Item difficulty and item discrimination are important as related to test validity or reliability. Item difficulty is measured in three ways. One way is to rank the items by their difficulty. A second way is to determine the average time needed to complete the item, the longer the time the more difficult the item. A third way is to determine the proportions of examinees who respond correctly to each item. 2 The more correct responses, the easier the item. Items that reveal a 50 per cent difficulty level are best, as they provide for the greatest number of individual differences. Table 3 shows a post-test item analysis (N=75) of the difficulty index intervals and the frequency of the items answered correctly. It can be noted that about 30 per cent of the items answered correctly were in the 40-60% range, the desired range of difficulty. The seven items in the 0-20% range and the three items in the 80-100% range have a difficulty level which suggests their removal. It was the writer's intent to have items which nearly everyone could pass and some which only a few subjects could pass. This would challenge the capable student and provide the less capable student with some degree of test taking success and, thus, reduce test resentment.

1 Tate, p. 204.
2 Ibid., p. 205.
TABLE 3

SUMMARY TABLE BASED ON ITEM ANALYSIS OF TOTAL POST TEST ONLY (N=75)

<table>
<thead>
<tr>
<th>Difficulty Index Intervals (Shown as Percent)</th>
<th>Frequency of Items in Interval Ranges Answered Correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 20</td>
<td>7</td>
</tr>
<tr>
<td>20 - 40</td>
<td>8</td>
</tr>
<tr>
<td>40 - 60</td>
<td>10 30% (approx.)</td>
</tr>
<tr>
<td>60 - 80</td>
<td>7</td>
</tr>
<tr>
<td>80 - 100</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Computer printout of item analysis

Item discrimination

An item is said to discriminate when the scores on a particular item are correlated positively with the total scores on the test. There are various ways of estimating the discriminative power of items. The simplest method is by subtracting the number of correct responses in the half having the lower total correct responses from the number of correct responses in the half having the higher total of correct responses. A similar estimate could be made by subtracting the correct responses of the group in the lower third of those having the lower total test scores from the correct responses of the group.
in the upper third having higher total test scores. The middle third is often not used because this group's scores do not provide enough difference between the upper and lower group.

The point biserial $r$ correlation is recommended as the best estimate of item discrimination. This biserial coefficient of correlation makes the assumption that the dichotomized variable is normally distributed. The greater the discrimination of the item (the greater number of responses made correctly by the upper group), the more reliable the test.

**TABLE 4**

**POINT BISERIAL $r$ CORRELATION INTERVAL**

Item analysis of total post-test only ($N=75$)

<table>
<thead>
<tr>
<th>Point biserial $r$ (Correlation interval)</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.0 - 0.10$</td>
<td>7</td>
</tr>
<tr>
<td>$0.10 - 0.20$</td>
<td>10</td>
</tr>
<tr>
<td>$0.20 - 0.30$</td>
<td>7</td>
</tr>
<tr>
<td>$0.30 - 0.40$</td>
<td>9</td>
</tr>
<tr>
<td>$0.40 - 0.50$</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Computer printout of item analysis

---

Table 5 shows all the items of all the groups. The reader will note that the first number below the item number is the proportion of those passing the item. The desirable number is 50, which provides the greatest discrimination. However, as it was stated earlier, easy items (those having a higher proportion passing) and difficult items (those having a lower proportion passing) were intended to be included. The former were to provide success, while the latter were to challenge the capable.

Reliability

In research evidence is said to be reliable if it can be verified by using a repetition of the process by which it was first obtained.\(^1\) In psychological testing there are three conventional ways of estimating a coefficient of reliability. One method is to apply the same test twice to a given group (test retest). A second way is to administer parallel forms of a test to a group. The third way is to divide a test into two equivalent halves. The correlation obtained indicates the extent of agreement between the two sets of observed scores or the self correlation of the test. In this study the coefficient of internal consistency, the Kuder Richardson (KR20), was chosen because it gives a reliability based on the average of all possible "split halves" ways of dividing the test. Table 6 shows the reliability coefficients using the KR-20.

The test is reliable at the .05 level of significance when post-test scores are combined. Reliability does not exist for any of the sub-groups

---
\(^1\)Tate, pp. 185-186.
### Table 5

**ITEM ANALYSIS OF PRE-TEST ON LOYOLA AND BOSTON TEACHER WORKSHOP GROUPS**

<table>
<thead>
<tr>
<th>Loyola</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>47/01</td>
<td>67/21</td>
<td>53/21</td>
<td>67/08</td>
<td>60/13</td>
<td>47/28</td>
<td>60/09</td>
<td>13/19</td>
<td>73/37</td>
<td>07/03</td>
<td>07/29</td>
<td>07/08</td>
<td>60/63</td>
<td>00/00</td>
<td>73/49</td>
<td>47/76</td>
<td>40/08</td>
<td>20/15</td>
</tr>
<tr>
<td></td>
<td>47/28</td>
<td>60/09</td>
<td>13/19</td>
<td>73/37</td>
<td>07/03</td>
<td>07/29</td>
<td>07/08</td>
<td>60/63</td>
<td>00/00</td>
<td>73/49</td>
<td>47/76</td>
<td>40/08</td>
<td>20/15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60/42</td>
<td>20/15</td>
<td>20/32</td>
<td>47/28</td>
<td>80/08</td>
<td>80/05</td>
<td>20/35</td>
<td>47/54</td>
<td>07/14</td>
<td>13/19</td>
<td>27/36</td>
<td>33/09</td>
<td>80/15</td>
<td>87/04</td>
<td>00/00</td>
<td>93/08</td>
<td>13/17</td>
<td></td>
</tr>
</tbody>
</table>

| Boston | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 87/10 | 67/26 | 33/02 | 80/05 | 60/11 | 60/02 | 27/11 | 73/37 | 13/08 | 20/65 | 13/38 | 60/27 | 27/26 | 47/32 | 33/13 | 13/10 | 40/30 |
|        | 47/28 | 60/09 | 20/35 | 47/54 | 07/14 | 13/19 | 27/36 | 33/09 | 80/15 | 87/04 | 00/00 | 93/08 | 13/17 | | | | | |

**ITEM ANALYSIS FOR FIVE GROUPS BASED ON POST-TEST ONLY**

| Loyola | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 53/51 | 47/20 | 33/04 | 67/72 | 47/00 | 67/45 | 87/02 | 100/00 | 33/33 | 20/13 | 20/05 | 93/02 | 00/00 | 20/03 | 67/34 | 93/36 | 60/25 | 77/18 |
|        | 87/10 | 67/26 | 33/02 | 80/05 | 60/11 | 60/02 | 27/11 | 73/37 | 13/08 | 20/65 | 13/38 | 60/27 | 27/26 | 47/32 | 33/13 | 13/10 | 40/30 |
|        | 47/28 | 60/09 | 20/32 | 47/54 | 07/14 | 13/19 | 27/36 | 33/09 | 80/15 | 87/04 | 00/00 | 93/08 | 13/17 | | | | | |

| DAE    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 07/18 | 33/37 | 33/33 | 27/27 | 20/14 | 33/02 | 80/21 | 53/15 | 00/00 | 13/18 | 07/18 | 80/48 | 13/19 | 20/35 | 40/17 | 13/10 | 60/05 | 27/38 |
|        | 47/28 | 60/09 | 20/32 | 47/54 | 07/14 | 13/19 | 27/36 | 33/09 | 80/15 | 87/04 | 00/00 | 93/08 | 13/17 | | | | | |

| PST    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 20/31 | 67/22 | 07/03 | 67/27 | 20/43 | 80/35 | 53/24 | 87/25 | 13/02 | 27/11 | 13/12 | 40/07 | 01/07 | 13/18 | 67/07 | 67/03 | 60/18 | 27/33 |
|        | 69/09 | 07/12 | 40/36 | 27/06 | 97/32 | 47/38 | 60/05 | 80/33 | 27/14 | 20/08 | 33/49 | 47/25 | 33/03 | 03/32 | 87/59 | 40/27 | 00/23 |

| EE     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 47/30 | 13/33 | 33/28 | 47/04 | 93/22 | 60/39 | 27/26 | 100/30 | 27/03 | 20/11 | 53/04 | 20/34 | 60/32 | 07/32 | 87/61 | 40/43 | 100/30 |

**ITEM ANALYSIS OF TOTAL GROUPS PASSING ON POST-TEST ONLY**

| Total  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|--------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
|        | 30/76 | 53/21 | 26/07 | 54/11 | 31/72 | 70/30 | 78/20 | 76/01 | 19/19 | 18/20 | 12/02 | 70/30 | 07/19 | 18/18 | 58/39 | 50/08 | 61/68 | 42/32 |
|        | 65/25 | 23/35 | 36/35 | 30/11 | 66/07 | 53/15 | 65/18 | 78/05 | 45/33 | 14/15 | 42/02 | 34/13 | 50/06 | 14/29 | 84/23 | 30/15 | 91/70 |

*Explanation: The first figure under the item number is the proportion of those passing the item. The next figure is Point Biserial r.*
<table>
<thead>
<tr>
<th>Pre-Test</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>KR-20*</th>
<th>Significance of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyola</td>
<td>14.27</td>
<td>2.49</td>
<td>.092</td>
<td>________________</td>
</tr>
<tr>
<td>Boston</td>
<td>15.27</td>
<td>2.87</td>
<td>.205</td>
<td>________________</td>
</tr>
<tr>
<td>Post-Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loyola</td>
<td>19.13</td>
<td>2.10</td>
<td>.35</td>
<td>________________</td>
</tr>
<tr>
<td>Boston</td>
<td>17.60</td>
<td>1.72</td>
<td>.139</td>
<td>________________</td>
</tr>
<tr>
<td>DAE</td>
<td>13.67</td>
<td>2.41</td>
<td>.036</td>
<td>________________</td>
</tr>
<tr>
<td>PST</td>
<td>15.27</td>
<td>2.76</td>
<td>.203</td>
<td>________________</td>
</tr>
<tr>
<td>EE</td>
<td>14.73</td>
<td>3.71</td>
<td>.208</td>
<td>________________</td>
</tr>
<tr>
<td>Total Post Test</td>
<td>16.04</td>
<td>3.06</td>
<td>.297</td>
<td>P .05</td>
</tr>
</tbody>
</table>

Source: Computer printout

*Kuder-Richardson Formula 20

considered separately, which is possibly due to their small sample size or their homogeneity.

Testing the First Null Hypothesis

The first null hypothesis stated:

There is no significant difference between the pre and post test means of participants of the Loyola and Boston ADAA Teacher Education Workshops.

To test the first hypothesis a two way analysis of variance (with repeated measure on one factor) was used. This analysis provided:
(1) A test of significance by location

(2) A test of significance of the combined Loyola and Boston pre test scores and combined Loyola and Boston post test scores.

The purpose of the test of significance by location was to determine if the workshop results could be repeated. The analysis showed that there was no significant difference in the post-test means by location. The assumption to be made is that future ADAA Teacher Education Workshops could achieve similar results provided that the same procedure was followed with similar groups of dental assisting educators.

An analysis of variance of the combined pre and post test scores of the workshop participants was done to determine whether or not the differences of the pre and post test scores of the 30 participants were significant. The test of the differences of these measures was significant at the .01 level, thus rejecting the first null hypothesis. This means that the higher scores achieved on the post test by the participants was due to the workshop experience in 99% of the cases. Table 7 shows the results of the test of significance by location and the test of significance between pre and post test scores of the combined Loyola and Boston groups.
## Table 7

### Two Way Analysis of Variance - Repeated Measure on One Factor

(Pre and post test scores of the Loyola and Boston workshop participants)

<table>
<thead>
<tr>
<th>Score</th>
<th>Square of Sums</th>
<th>Degree of Freedom</th>
<th>Means Squared</th>
<th>Frequency</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>528.73</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Subjects</td>
<td>203.73</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>1.06</td>
<td>1</td>
<td>1.06</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>Error b</td>
<td>202.67</td>
<td>28</td>
<td>7.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Subjects</td>
<td>325.00</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test-Retest</td>
<td>194.39</td>
<td>1</td>
<td>194.39</td>
<td>51.15</td>
<td>.0</td>
</tr>
<tr>
<td>Interaction</td>
<td>24.09</td>
<td>1</td>
<td>24.09</td>
<td>6.34</td>
<td>.05</td>
</tr>
<tr>
<td>Error W</td>
<td>106.52</td>
<td>28</td>
<td>3.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computer printout
The second null hypothesis in this study stated:

There is no significant difference in the post-test means of the participants of the Loyola and Boston ADAA Teacher Education Conference and the three control groups of educators.

To test the second null hypothesis, a one way analysis of variance was used. This compared post-test scores of the experimental groups (Loyola and Boston) with the control groups (three groups of educators). The analysis at the .05 level of significance rejects the second hypothesis. Table 8 shows the one way analysis of variance for the five groups.

The comparison of the post-test scores among the two experimental groups and the three control groups was to determine if the differences of the scores could be attributed to the workshop. The higher scores of the two experimental groups, as evidenced by a comparison of the means of the five groups, supports the assumption that the workshop can provide meaningful learning experiences for adults.
TABLE 8
ONE WAY ANALYSIS OF VARIANCE ON POST TEST SCORES OF FIVE GROUPS (N=75)

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Loyola</th>
<th>Boston</th>
<th>Dental Assisting Educators who did not attend workshop</th>
<th>Public School Teachers</th>
<th>Education Experts Public School Administrators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Mean</td>
<td>17,6000</td>
<td>19,1333</td>
<td>13,6666</td>
<td>15,2111</td>
<td>14,8666</td>
</tr>
<tr>
<td>St. Deviation</td>
<td>1,7237</td>
<td>2,0998</td>
<td>2,4102</td>
<td>2,7637</td>
<td>2,6990</td>
</tr>
</tbody>
</table>

ANALYSIS OF VARIANCE

<table>
<thead>
<tr>
<th></th>
<th>Square of Sums</th>
<th>Degree of Freedom</th>
<th>Means Squared</th>
<th>Frequency</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups within groups</td>
<td>2938.1351</td>
<td>4</td>
<td>734.5335</td>
<td>13.139</td>
<td>.05</td>
</tr>
<tr>
<td>Total</td>
<td>3913.3269</td>
<td>70</td>
<td>55.9046</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6851.4562</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Computer printout
Division of the Test

The test was divided into two parts. Part one dealt with teaching principles and practices. Part two contained test items of an interpersonal nature. An analysis of the two sections of the test was done to determine intercorrelations. The two sections of the test did not correlate with each other as expected, since the material was different. However, the two sections did correlate with the total as they should. Table 9 shows the intercorrelations.

TABLE 9

INTERCORRELATIONS OF THE TWO MAJOR SECTIONS OF THE POST-TEST ONLY

<table>
<thead>
<tr>
<th></th>
<th>Section I</th>
<th>Section II</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section I</td>
<td></td>
<td>.03</td>
<td>.89</td>
</tr>
<tr>
<td>Section II</td>
<td>.03</td>
<td></td>
<td>.49</td>
</tr>
<tr>
<td>Total</td>
<td>.89</td>
<td>.49</td>
<td></td>
</tr>
</tbody>
</table>

Source: Computer printout
Other Methods Used to Evaluate the Workshop

Questionnaires, observation and discussion with the workshop participants were used in evaluating the workshop in this study. The participants were informed that their evaluation would be seriously considered in revising, modifying, extending or deleting portions of future ADAA Teacher Education Workshops. The results obtained from these questionnaires tended to substantiate the fact that the workshop did provide experiences which would help these teachers in their future teaching responsibilities.

The questionnaire responses showed that the needs of this group of educators were accurately assessed. This was borne out when the participants were asked to rank the workshop proceedings (items 1 and 2). A greater number ranked the teacher preparation portion (writing student and course objectives, teaching methodologies, evaluating procedures and information dealing with interpersonal relations) the highest of all the workshop presentations. These same areas were considered important as indicated by the 1965 report and by the 1970 questionnaire.¹

Items 3-11 dealt with the separate topics and presentations. Item 12 asked the respondents to write a short paragraph concerning their overall feeling of the workshop experience. (See Appendix C). Table 10 shows the tallied responses of items 1-11.


American Dental Assistants Association Survey to Dental Assisting Program Director, Chicago, ADAA Department of Education, 1970.
TABLE 10
ADAA TEACHER WORKSHOP EVALUATION QUESTIONNAIRE RESULTS

Please rank 1-4 (1 being the highest) or check the response of your choice of the following:

1. Among the areas presented at the teacher conference rank 1-4 the order of the topics that you feel will be most helpful in your future teaching responsibilities.

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>Audio-visual</td>
<td>2 7 10</td>
<td>3 12 2 4</td>
<td>3 14 9 14</td>
</tr>
<tr>
<td>Laboratory</td>
<td>3 5 7 4</td>
<td>1 6 10 4</td>
<td>4 11 17 8</td>
</tr>
<tr>
<td>Clinical</td>
<td>6 9 3 1</td>
<td>3 3 5 10</td>
<td>9 12 8 11</td>
</tr>
<tr>
<td>Lecture</td>
<td>13 3 1 2</td>
<td>15 2 2 2</td>
<td>28 5 3 4</td>
</tr>
</tbody>
</table>

2. Among the topics presented at this teacher conference rank 1-4 the order of the topics that you felt to be the most interesting.

<table>
<thead>
<tr>
<th></th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
<th>1 2 3 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio-visual</td>
<td>1 8 10</td>
<td>4 10 4</td>
<td>3 4 11 12 13</td>
</tr>
<tr>
<td>Laboratory</td>
<td>2 2 8 7</td>
<td>3 9 5 4</td>
<td>5 11 13 11</td>
</tr>
<tr>
<td>Clinical</td>
<td>4 11 1 2</td>
<td>1 17 7 11</td>
<td>5 17 7 11</td>
</tr>
<tr>
<td>Lecture</td>
<td>14 3 2 16</td>
<td>1 3 1</td>
<td>30 4 5 1</td>
</tr>
</tbody>
</table>

3. Which of the following in your opinion best explains the presentation of information dealing with deriving objectives?

A. Clear 16 17 33
B. Fair 3 3
C. Adequate 3 1 4
D. Inadequate
Continued

4. Which of the following best explains the information dealing with five student performance levels that were presented?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>11</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>B. Fair</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Which of the following best explains the sequencing of learning material that was presented?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>16</td>
<td>20</td>
<td>36</td>
</tr>
<tr>
<td>B. Fair</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>D. Inadequate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Which of the following best explains the teacher methodology presentation?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>13</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>B. Fair</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Which of the following best explains the evaluation portion of the conference?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>11</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>B. Fair</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
8. Which of the following best explains the audiovisual portion of the conference?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>11</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>B. Fair</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>

9. Which of the following best explains the lecture portion of the conference?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>19</td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td>B. Fair</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

10. Which of the following best explains the presentation of the clinical portion of the conference?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>18</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>B. Fair</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

11. Which of the following best explains the presentation of the laboratory portion of the conference?

<table>
<thead>
<tr>
<th></th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Clear</td>
<td>9</td>
<td>15</td>
<td>24</td>
</tr>
<tr>
<td>B. Fair</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>C. Adequate</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>D. Inadequate</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Comparing Questionnaire Results

In order to provide evidence showing the consistency of the needs of dental assisting educators, it was felt that a comparison of the questionnaires, which were sent to the dental assisting program directors, and the questionnaires completed by the workshop participants was in order. The original objective of the workshop was to give the dental assisting educators material and presentations which would best help them in their teaching responsibilities. Since "teacher preparation" was ranked as most needed by the dental assisting program directors, it would follow that this area should be the most important subject of the workshops. The results of the workshop questionnaire completed by the participants showed that the "teacher portion" was ranked nearly 2 to 1 over the other areas presented. In the area where a choice was made from among a number of possibilities the "teacher preparation portion" also was the one which received the highest rating of those presented, with the "clinical presentation" being second. This high ranking by the workshop participants indicated that the ADAA workshop did meet the needs of this group of adults.
TABLE 11

COMPARISON OF COMBINED RANKING OF QUESTIONNAIRES
(One is the highest rating)

<table>
<thead>
<tr>
<th>Dental assisting program directors</th>
<th>Dental assisting workshop participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Areas of teacher need</strong></td>
<td><strong>Topics most helpful to teachers</strong></td>
</tr>
<tr>
<td><strong>1</strong> 2 3 4 5</td>
<td><strong>1</strong> 2 3 4 Teacher Preparation</td>
</tr>
<tr>
<td>Teacher Preparation</td>
<td><strong>28</strong> 5 3 4 Teacher Preparation</td>
</tr>
<tr>
<td>Clinical</td>
<td>9 12 8 Clinical</td>
</tr>
<tr>
<td>Laboratory</td>
<td>4 11 17 Laboratory</td>
</tr>
</tbody>
</table>

Source: Questionnaires to dental assisting program directors and ADAA Teacher Conference participants. (All workshop participants' questionnaire results are included).

Table 11 shows the teacher preparation portion of the workshop was that area deemed most important by the dental assisting program directors and by the dental assisting teacher workshop participants. Table 11 shows the consistency of dental assisting teacher needs, as well as the fact that the Association's dental assisting teachers' conferences and workshop, thus far, were successful in helping dental assisting educators in their teaching responsibilities.¹

¹The participants' responses to Item 12 can be found in Appendix C.
Follow-up Questionnaires

To substantiate the fact that the workshop can motivate adults to continue pursuing topics which were part of the workshop program, several questionnaires were used. This was to ascertain the professional teacher preparation engaged in by all members of the five groups during the summer of 1971. These follow-up questionnaires were sent to the dental assisting educators who attended the ADAA Teacher Education Conferences. Similar questionnaires were administered to the three control groups.

Table 12 on the next few pages indicates how the separate groups responded. Although the comparison of the five groups does not reveal a great deal of difference, there is visible evidence that the ADAA Teacher Education Workshop participants did receive instruction following the workshop experience. They engaged in professional teacher preparation more than the control groups. Questionnaire samples are to be found in Appendix D.
## TABLE 12

**COMPARISON OF THE FOLLOW-UP MOTIVATION RESEARCH SENT TO THE FIVE GROUPS**

<table>
<thead>
<tr>
<th>Survey items</th>
<th>Loyola Boston</th>
<th>Dental Assisting Educators who did not attend</th>
<th>Public School Teacher</th>
<th>Educational Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. As a result of this past summers activity you plan to change your teaching techniques.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerably</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>To some degree</td>
<td>12</td>
<td>9</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2. The material you have read last summer concerning professional training will be used in your teaching responsibilities for this year or to assist you in your administration role.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerably</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>To some degree</td>
<td>1</td>
<td>13</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>3. Activities engaged in this summer have increased your self confidence in your classroom or as an administrator.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerably</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>To some degree</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>
Comparison of the Follow-up Motivation Research Continued

<table>
<thead>
<tr>
<th>Survey items</th>
<th>Loyola Boston</th>
<th>Dental Assisting Educators who did not attend</th>
<th>Public School Teacher</th>
<th>Educational Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. If you attended activities which dealt with professional preparation, such as deriving objectives, teaching methodologies, and evaluation, your knowledge in these areas has:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased considerably.</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Increased to some degree.</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Has not increased.</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Did not attend activity of this kind</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

5. Last summer's activities have motivated you to engage in further professional preparation.

<table>
<thead>
<tr>
<th></th>
<th>Considerably</th>
<th>To some degree</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

Items 5a and 5b were completed by the Loyola and Boston Groups only.
Comparison of the Follow-up Motivation Research Continued

5a. If you have attended or
if you are planning to
attend professional
teacher preparation
courses, please list
the courses.

(Number of Responses)

Test and Measurement courses 2
Teacher Conferences 2
Curriculum Course 3
Teacher Methods Courses 4

5b. If you have read texts
dealing with professional
teacher preparation please
list them. (Also, if you
have read texts listed in
the bibliography of ADAA
Teacher Conferences and
Workshops manual please
indicate them).

(Number of Responses)

Analyzing Performances Problem - Mager 6
Preparation Instruction Objectives - Mager 6
Developing an Attitude Toward Learning - Mager 5
Body Language - Julius Fast 2
Psychology 2
Test & Measurement 2

Source: American Dental Assistants Association, "Dental Assisting Teacher Workshop Evaluation" (Chicago: Education Department, October, 1971)

American Dental Assistants Association, "Professional Teacher Preparation Evaluation" (Chicago Education Department, October, 1971).

Director of Instructional Service, "Survey of Professional Public School Educators" (McHenry, January, 1972)
CHAPTER VI

FINDINGS, IMPLICATIONS AND RECOMMENDATIONS

An analysis of the data in Chapter V showed that the workshop was an effective means to teach adult dental assisting educators, and to motivate these adults to seek further information on topics which were part of the workshop presentations. Other methods used to evaluate the workshop corroborated the statistical findings.

Using a multiple evaluation approach in this study was intended in order to give a more comprehensive picture of the program. An informal evaluation of the workshop by the participants provided further insight into its activities. Future ADAA Teacher Education Conferences and Workshops will be revised or modified with these comments in mind.

There are some possible further studies suggested by this investigation. One could be an evaluation comparing various programs designed to instruct adults. The effectiveness of each of these approaches could be determined. This type of study could shed light on such questions as: "How much time is needed to teach adults certain subjects of tasks?"; "What is the value, if any, of interaction between the teacher and the adult student in a classroom situation as related to learning?" or "How does the lack of an instructor-student interaction affect learning, as in correspondence courses?" Studies based on these questions could provide important information related to different learning approaches and programs planned for adults.
Another investigation could involve teacher performance on those tasks considered to be necessary in teaching situations. These might include: student performance objectives, methodologies (multiple approaches) evaluation techniques (student and program) and interpersonal relations as applied to the classroom. If we assume that the subject matter and skills presented in teacher education courses are important, then perhaps refresher programs dealing with these topics should be arranged. In this study the workshop participants scored higher on the post-test (as evidenced by the higher means achieved by the two experimental groups) than did the public school teachers and public school administrators. Either the public school teachers were not applying the skills learned in their teacher education courses, or refresher programs were needed for them to retain acceptable levels of performance in these areas.

Still another investigation could involve designing a hierarchy classifying adult educational programs. Using Bloom's Taxonomy: Cognitive Domain as a guide, perhaps a classification system for adult instructional programs could result. This study could help identify the necessary conditions and standards for each program involved. From the review of adult education literature in Chapter II, it seems that programs to communicate with adults are needed now and in the future. A hierarchy based on program evaluation which categorized adult educational programs according to purpose, conditions and effectiveness would seem invaluable to those responsible for directing adult learning experiences.
Recommendations

Because the field of adult education is so vast, new techniques and methods to instruct adults should be continually sought. For example, correspondence courses might be made attractive if they contained fewer assignments and provided better feedback. Many dental assistants, who began the North Carolina correspondence course to become certified, gave it up because of the volume of work required. A substantial portion of the information contained in the seven texts included in this course is not essential.

A second recommendation is to investigate instructional methods which would yield the best results. Careful assessment of programs and activities of long and short duration are needed. For example, a new appliance or apparatus may make life more enjoyable. Yet what would this cost in terms of our environmental security or how is the use of the world's raw material going to affect the lives of this generation and generations yet to come? Meaningful decisions will have to be made. To make these decisions man will have to be informed. The methods used for this purpose will necessitate evaluation in order to assure accuracy and the effectiveness of various approaches.
Dissertation Summary

In this study the workshop method of teaching selected adults in special subject matter areas was evaluated. There were two experimental groups: one consisting of 15 dental assisting educators who attended the Loyola American Dental Assistants Association's Teacher Education Workshops and the other consisting of 15 similar educators, who attended the Boston ADAA Teachers Education Workshop. Three control groups were educators who did not attend an ADAA Teacher Education Conference, and consisted of: 15 dental assisting educators selected randomly on a nationwide basis, 15 public school teachers and 15 public school administrators.

Pre and post tests were used to assess the learning of the workshop participants. Test items were written directly from the workshop participants' objectives. A post-test only comparison of the five groups was made to determine the value of the workshop.

Two null hypotheses were tested. The first stated: there is no significant difference in the means of the pre and post test results of the workshop participants. The second stated: there is no significant difference in the means of the post test results of the experimental groups and the control groups. The .05 level of significance was used to reject the hypotheses in this study.

A two way analysis of variance (with repeated measure on one factor) was used to test the first hypothesis. The analysis showed a significant difference between pre and post test scores of the workshop participants at
the .05 level, thus, rejecting the null hypothesis.

To test the second hypothesis, a one way analysis of variance was used. The second hypothesis was rejected at the .05 level of significance.

Other methods used to evaluate the workshop included: written evaluation by the participants, observation and discussion with the participants by the writer. These procedures helped provide a more comprehensive evaluation of the workshop activities.

To determine the motivational influence of the workshops, questionnaires were sent to all the participants in the study. These questionnaires showed that the workshop participants engaged in teacher training activities more than those in the three control groups.

This study showed that the workshop was an effective means to teach adults. The writer does suggest, however, that efforts be made to evaluate adult education. The review of adult literature undertaken in this study pointed out the need for programs to instruct adults. According to writers in this field, the need for adult education will continue and more research in adult teaching methods is needed.
REFERENCES


177, 180, 181.


**PERIODICALS**


**UNPUBLISHED MATERIAL**


APPENDIX A

QUESTIONNAIRE TO DENTAL ASSISTING PROGRAM DIRECTORS

The questionnaire that follows and the tallied responses are intended to disclose what these dental assisting program directors felt were the most pressing needs of their dental assisting instructors.

I. Rank (1-5, with 5 being the highest rank) the areas of dental assisting that you feel would be of the most importance to dental assisting instructors who have had only a minimum of professional teacher preparation and teaching experience.

<table>
<thead>
<tr>
<th>Area</th>
<th>Midwest Region</th>
<th>New England Region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Responses 29</td>
<td>Total responses 18</td>
</tr>
<tr>
<td><strong>Teacher Preparation</strong></td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>Clinical Application</strong></td>
<td>2 3 2 22</td>
<td>2 3 13</td>
</tr>
<tr>
<td><strong>Laboratory Procedures</strong></td>
<td>4 7 11 7</td>
<td>3 5 7</td>
</tr>
<tr>
<td><strong>Office Management</strong></td>
<td>1 10 13 3 2</td>
<td>3 6 3 4 2</td>
</tr>
<tr>
<td><strong>Interpersonal Relations</strong></td>
<td>6 9 8 4 2</td>
<td>5 4 7 1 1</td>
</tr>
</tbody>
</table>

Total Responses for Both Regions (47)

<table>
<thead>
<tr>
<th>Area</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Preparation</strong></td>
<td>4 3 5 35</td>
</tr>
<tr>
<td><strong>Clinical Application</strong></td>
<td>7 10 16 14</td>
</tr>
<tr>
<td><strong>Laboratory Procedure</strong></td>
<td>4 16 16 7 4</td>
</tr>
<tr>
<td><strong>Office Management</strong></td>
<td>11 13 15 5 3</td>
</tr>
<tr>
<td><strong>Interpersonal Relations</strong></td>
<td>12 10 10 7 8</td>
</tr>
</tbody>
</table>
QUESTIONNAIRE CONTINUED

The questionnaire to program directors contained six items. After the ranking portion of the questionnaire, five items were included which asked the directors to respond to questions concerning the proposed workshops and questions dealing with more specific topics intended to help the dental assisting teachers who lacked professional teacher training. The responses were as follows:

2. Which of the following indicates your response to these proposed programs?

<table>
<thead>
<tr>
<th>Option</th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very badly needed</td>
<td>19</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>B. Needed</td>
<td>8</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>C. Needed but revised</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>D. Not needed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Which of the following indicates your choice concerning the development of course objectives in teaching dental assisting?

<table>
<thead>
<tr>
<th>Option</th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very badly needed</td>
<td>15</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td>B. Needed</td>
<td>13</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>C. Sometimes needed</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>D. Not needed</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

4. Which of the following best indicates your choice concerning providing participants of these programs with demonstrations and information dealing with multiple teaching methodologies?

<table>
<thead>
<tr>
<th>Option</th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very badly needed</td>
<td>14</td>
<td>7</td>
<td>21</td>
</tr>
<tr>
<td>B. Needed</td>
<td>15</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>C. Sometimes needed</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>D. Not needed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Which of the following indicates your response concerning demonstration, information and practical experience in utilizing a multiple approach to student evaluation?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Very badly needed</td>
<td>11</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>B. Needed</td>
<td>15</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>C. Sometimes needed</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>D. Not needed</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

(two responses not checked)

6. Which of the following choices indicates your feeling concerning your school's participation in these proposed teacher preparation programs?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Midwest</th>
<th>New England</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Our school would like to participate in these programs</td>
<td>28</td>
<td>17</td>
<td>45</td>
</tr>
<tr>
<td>B. Our school would not like to participate in these programs</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

(One response not checked)

Ranking Problem

There was a problem in describing an accurate ranking since some of the dental assisting program directors ranked all the items using the same rank. For example, a few of the respondents gave the rank of 5 to all five areas.

The sampling of the experimental groups in this study was directly controlled. The selection criteria for the ADAA Teacher Education workshop participants will be noted on the next page.
Participant Selection Criteria

the last section of the questionnaire sent to the dental assisting program directors contained the criteria for the selection of workshop participants. Three choices were provided:

First choice: Dental assisting instructors without degrees

Second choice: Dental assisting educators with Associate of Arts degree

Third choice: Dental assisting educators with a Bachelor of Arts degree who have not had a course in the last year.

From the results of the questionnaire to the dental assisting program directors, the materials, topics and presentation for the proposed dental assisting teacher conferences and workshops were developed.

\[1\] Memo to Dental Assisting Program Directors from the American Dental Assistants Association's Director of Education, (Chicago: Education Department, February 1971).
APPENDIX B

SUMMARY OF ADAA TEACHER EDUCATION WORKSHOP PRESENTATION AND MATERIAL

The material given to the workshop participants was intended as resource material. Hopefully, these educators could use this material in their teaching responsibilities. The material dealt with deriving student and course objectives, teaching methodologies, evaluation, audio visual information and interpersonal relations. A simple diagram was included to show the relationships among the objectives, methodologies and evaluation. This diagram appeared as follows:

```
Objectives

Evaluation               Methodology
```

To assist the dental assisting educators in deriving objectives, Robert Mager's, *Preparing Instructional Objectives*, was utilized. This author advises that properly stated student performance objectives describe what the student will be doing and the condition of the activity (observable behavior). The objective must accurately express the desired student performance according to this author.¹

¹Robert Mager, *Preparing Instructional Objectives*, p. 3.
Further information given to these instructors suggested that five skills are usually needed in new learning activities:

1. Discrimination skill
2. Problem solving skill
3. Recall skill
4. Manipulative skill
5. Verbal skills (including writing).¹

The dental assisting teachers were advised to teach their courses incorporating information about these skills. For example, dental assistants frequently mix amalgam (filling material). The first skill needed in this procedure is that of recall, i.e., knowing the ingredients and in what order. The next step would require manipulative skill, as this material must be mixed in a certain manner. The last skill is discrimination skill to determine if the mixture is acceptable.

Sequencing of instruction was presented at the workshop. Six sequential steps were listed:

1. General to specific sequencing
2. Interest sequencing
3. Logical sequencing
4. Skill sequencing
5. Frequenting sequencing
6. Total practice sequencing.²

² Ibid., pp. 59-61.
Many examples of general to specific sequencing were given throughout the workshop. All four instructors began their presentations in this manner. Hopefully, the participants were provided with examples of this material presented so they could make better use of it in their own classroom responsibilities.

The example used to demonstrate frequency sequencing was tray set-up in dental assisting practices. Since tray set-ups are made many times a day in the dental assisting duties, learning these set-ups quickly is important. If the student had to leave the dental assisting educator's class before completing the course, she or he would do so with an applicable skill taught early in the course. Background information could be included if time permitted, but priority based on frequency of the task to be performed should determine when it should be taught. All six sequencing steps were discussed at some length.

Teaching methodology was discussed. Suggested ways and means to implement student objectives included:

1. Lecture
2. Discussion
3. Independent study
4. Field trips
5. Demonstrations.

These instructors were advised that different topics require different teaching methods. Thus, a multiple methodology was recommended. The participants were told "Creating a learning climate was important." Tyler's five factors in

1Ibid.
in providing a successful learning experience were given:

1. The learner should have opportunities to practice the behavior objective stated.
2. The learner should have satisfaction in the learning experience.
3. The learning experience should be within the ability range of the learner.
4. Many methods should be used to teach the objectives.
5. Several desirable outcomes should result from the learning experience.

The participants were informed that a multiple evaluation procedure is better than relying on one method such as the test alone. Suggested evaluation techniques included:

1. Observation
2. Self-evaluation
3. Anecdotal records
4. Oral examination
5. Paper and pencil tests.

Information dealing with each of these techniques was presented. Paper and pencil tests were given considerable attention. Participants were advised to be careful of using test results alone to evaluate their students. They were cautioned that the test could be invalid and unreliable. Examples of writing test items and discussion of kinds of items with their strengths and weaknesses were provided.

The definition of a test was given during this portion of the program.

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According to Cronbach (1960) a test is a comparison of two or more individuals doing the same task compared with some known criterion.\(^1\) Testing procedure was also discussed as well as administering and scoring the test properly.

**Learning Theories**

The participants were introduced to learning theory concepts. Those theories discussed at some length were:

1. Mind muscle concept (direct transfer theory)
2. The trial and error approach (Thorndike)
3. Gestalt learning principles (Werthiemer)
4. A perceptual approach to learning (Combs)
5. Eclectic learning theory approach.

Examples of each theory were given in such a way that the participant had to determine what theory was being suggested. For example:

The dental assistant is disturbed by an amalgam mix. She knows it is not proper but not actually what is wrong with it. She remains still and studies the mix. Suddenly she gets up and mixes another batch which turns out correctly.

This followed an in-depth discussion of all the learning theories presented. Most of those present could accurately determine what theory was most closely associated with the situation described after a little practice.

**Effective Communication**

Since one of the areas intended for this group of educators was developing desirable interpersonal relations, information concerned with

effective communication was included. Those present learned that people have physical and psychological needs that must be met. Unless these needs are met, the person could develop undesirable social behavior. This undesirable behavior would not be helpful in effective communication nor in creating good relationships with others.¹

It was suggested that culture has a great influence on communication. Knowing one's own culture can help in communicating effectively. Quinn (1962) described culture as follows:

1. It must be communicated (language)
2. It must be shared
3. Its objects must be shaped by Man.²

Those in attendance were informed that Hall (1970) divided culture into three categories: formal, informal and technical. The purpose for this division was to understand the complexities of cultures. This author felt if the divisions of culture were understood, then change within a culture could be brought about effectively and with moderate resistance. In other words knowing about these divisions in culture would facilitate effective communication. This is, of course, dependent on how the proposed change is to be implemented. Hall expressed that culture hides much more than it reveals.³

Space, aggression, semantics and kinesics were discussed at some length.

The relationship was drawn between those topics and effective communication. Particular attention was given kinesics (body language). The participants were instructed concerning gestural language as related to agreement, disagreement, dominance, etc. ¹

Each of the four instructors was responsible for a portion of the two and one-half day workshop. As ADAA Director of Education I shared presenting teaching principles and practices with another instructor. The clinical and laboratory portions were presented by two other teachers. Every effort was made to reinforce concepts that we, as instructors, felt to be especially important to teachers. All of the instructors had at least ten years of teaching experience so we felt that our suggestions would be practical.

APPENDIX C

ADAA TEACHER EDUCATION CONFERENCE QUESTIONNAIRE
EVALUATION: RESPONSES TO ITEM 12

The Midwest and New England responses are shown separately to indicate that the different groups responded favorably and similarly to the workshop presentation. (All those who responded to item 12 included):

**Midwest participants' responses to item 12**

1. The two day workshop was an over all success for me. I came to the workshop blindfolded and my eyes were opened immediately by the stimulating lectures and the materials presented. This is really the first workshop I have attended so I don't have any thing to weight it against. I found the Lab material less stimulating than the other parts. I intend to purchase a number of recommended books to help me prepare myself more for this new career.

2. The workshop has been excellent. While I feel I have gained much from it, I would prefer future workshops on such things as dental materials, techniques, anatomy, etc. We have sources elsewhere for teacher training and methodology courses. I do hope that there will be more workshops. We gain much by getting together with people from other schools and areas for exchange of ideas.

3. I felt the participants, lecturers and all involved in the program were most interesting. The exchange of ideas was most valuable. I feel very grateful to have been a part of this workshop. As a participant it has been well worth while.

4. I feel I have gained more knowledge, that I can directly apply to my teaching situation from this workshop session than from any meetings I have ever attended. It has just been great. I would suggest in the future, however, the materials reach the participants earlier so that they have more time to cover the material presented during the workshop. I am grateful for the opportunity to participate in this workshop.
Midwest participants' responses to item 12 continued

5. Even if we were the experimental group I still felt we had good interaction of the participants by the second day.
   Perhaps-coffee (informal) meeting the night before the workshop starts so we can perhaps have the interaction sooner in the workshop, excellent job—well done.
   Lots of "meat" to rehash for our own individual needs once we all get back home and can absorb all the goodies!
   We all thank you for being interested enough in each of us as individuals to share your knowledge—Gestalt!!

6. A lot of good information was presented in very brief time. I felt hurried and grasping hard to comprehend all the material.
   It was a very worthwhile experience; good instructors and instruction; very adequate arrangements and pleasant surroundings.
   I personally appreciated having someone in the motel awaiting our arrival—a personal thought and very nice—showed a great interest in each one of us.
   I thank you and the ADAA for a valuable learning experience.

7. Thank you for a most enjoyable workshop and conference. I did learn a lot to take back with me and I fully intend to put this material to use. I would like to attend another session in the future.

8. This has been the best workshop I have attended in this area. I feel every teacher should have this knowledge in order to be able to teach. It should be a pre-requisite for teachings.

9. Greatly needed—much appreciated—very usable. The time and effort obviously put into the conference material resulted in a very interesting and educational meeting. I am very happy to have been a part of the conference.

10. The program was excellent. All of the instructors knew their material and were sincerely willing to help us. I would like to see one of these conferences each year, to maintain contact with other schools and the ADAA education office. It was a great morale booster.

11. On the whole, very good. Would hope that other instructors in this area who were not privileged to attend this conference may attend a similar one in the future.
Not sufficient time during conference to digest (only skim) material distributed. Material presented would have been even more meaningful.

12. This is directed to we instructors on our level—with us in mind. It is most helpful and has been the best I have ever attended. I hope we are involved in more of these. We have found ourselves (sic) in this program.

13. We certainly need more of this kind of help. It was so well done and I can't believe how much I learned (sic). Thank you—God bless!

14. This workshop is very rewarding! This past year, being my first, has also been rewarding for me, because it has been a challenge all the way! I think that a workshop such as this should be given before an individual goes into the education field. I plan to use this outline until I come across a better guide.

15. The reason that I have not given an explanation for some of my answers is because this workshop has guided me so, that I just feel that everything was great, and I thank you for your assistance to me in planning my program for next year.

16. Excellent, wished it could have been sooner. I do feel this type of thing should be continued, but I do wish that practical areas of teaching could be covered. Chairside techniques—teaching methods applied in a practical situation. Material covered would have been more beneficial if one had it before the conference.

17. The workshop was well planned. However, I feel that more time should be allotted. I enjoyed every bit and I am looking forward to attending such a workshop again. I feel all instructors throughout the country should have this opportunity each year. Perhaps this could be done through a dental teacher national organization.

Perhaps it could be planned to present each phase of dentistry in the method of presentation, examination and evaluation.

**Over-all evaluation**

18. This teacher conference was by far the best I ever attended, and at no time before have I encountered such empathy and compassion for D.A. instructors.

This workshop was so well prepared and conducted that the participants did not want to leave for break and also returned early to reconvene.
Over-all evaluation

The evening session was an excellent aid to exchange ideas and to learn from each other.

Conferences like these are a must for a D.A. instructor, but they are especially helpful to the beginning instructor. She is faced with tasks totally foreign to her. She knows her subject material but has little formal education in education and administration. This is of course a big handicap and can not be erased by taking the state required courses. These courses have little relation to our unique problems. However, at this workshop, we learned the right approach to objectives, the educational process, evaluation and the efficient handling of student records. The topics and presentations were correlated to our problems and will be significant in alleviating our frustrations in the future.

I highly recommend to continue these workshops until every D.A. instructor had the opportunity to derive the benefits of this educational experience.

...should be commended for recognizing our needs for continuing education in educational philosophy and methodology, and therefore preparing this workshop for us. His course outline is outstanding and will be used as an excellent source for reference material and as a guide for rewriting objectives. It was indeed a privilege to attend this workshop and be exposed to such proficiency.

Missing responses

There were 20 participants present at the Midwest workshop but they were not required to complete item 12. It was felt that some of the respondents did not complete item 12 because of the time element involved. The last part of the workshop was the completion of the questionnaire which followed the post-test. It was observed that the last three students who completed the post-test were hastily trying to complete the questionnaire.
New England participants' responses to item 12

1. This kind of program is of tremendous value. I would like a conference planned around perhaps only one or two specific areas of training, e.g., chairside assisting with demonstration of types of approaches.

2. I enjoyed the workshop immensely. It taught me how to do and appreciate teaching much more. This workshop should have been given in three days. All the material presented was done exceptionally well.

   I would like to see a follow up of this program after the teachers have had a chance to practice what we have learned and telling how it was received in our own situations.

   Again thank you for the opportunity to attend the workshop.

   I would like to suggest the use of more audio-visual aids to help us understand a little better.

3. The teacher conference workshop was thoroughly enjoyed by this participant. I found it extremely interesting and helpful as an educator in dental assisting. The instructors did an excellent job.

   It is hoped that additional conferences can be held but if this amount of material is to be covered an extra day would be more helpful!

4. These workshops, in my opinion are the most innovating events that have happened in the field of dental assisting education. The information ingested during the workshop will certainly be utilized in my own teaching experience.

   May I also note that the book that was sent is an excellent piece of reference material and should be available to other D. A. educators that were not able to attend.

   May I have this opportunity to commend the excellent teaching methods that were utilized by our staff and I wish to thank you for allowing me to share this unique experience.

   Recommendation: When presenting the lab procedure, if time could be afforded for practical experience.

5. I feel that the workshop was excellent. I think too much emphasis was put on the laboratory portion and not enough on performance levels of student and methodology.

6. This was a very interesting, informative and worthwhile workshop that brought forth a wealth of information guiding us with our many problems we face in dental assisting programs. The speakers were excellent—Thank you for the privilege.
7. I felt the teachers conferences and workshops were excellent. I learned a lot from them especially writing of objectives. I feel that more depth should have been emphasized in practicing writing objectives.

The separate group discussions were very interesting. Getting to know some of the other women participating in the workshop and the variety of the organizations of the dental assistant programs.

The instructors were more than helpful in every way and very friendly-informal which made me very comfortable. Thank you for letting me participate in your workshop.

8. I did thoroughly enjoy this conference. There were aspects of it I felt personally could have been explained in more detail. It was interesting to get an "over-all picture" of how other groups have organized their programs from this, you have the opportunity to gather new ideas to add to your program.

I do also feel this conference could have allotted more time (3 or 4 days as opposed to 2 days) Thank you for this opportunity to participate.

9. Very informative material presented-pertinent to needs of participants present.

Receiving manual in advance aids by giving participants a better knowledge of what will be covered. Provides opportunity to consider material and ask questions regarding difficult subjects.

As in all workshops, the opportunity to meet other instructors in the field and compare and discuss problems is beneficial.

10. I appreciate the opportunity to have been selected to take part in the "workshop."

All the presentations were very informative and most interesting given. The "expertise" of the staff was indeed vividly displayed. I would like to attend a workshop at a future date dealing exclusively in the clinical aspect of dental assisting. I feel all new dental assistant teachers would feel more secure within the teaching of their profession with aid of this type.

11. It is very obvious that there was a great deal of thought and a tremendous amount of work involved in planning this workshop. The group responsible should be congratulated in the work done so well.

I was particularly pleased with the selection of the group-including the various schools represented all age groups. It was refreshing to listen to the recent graduates and young instructors. Their ideas and suggestions gave me some food for thought.

The speakers were interesting and informative. Workshops of this nature should be continued in local areas several times a year and at least once a year on a regional basis-this could solve regional problems rather than national.
New England's participants' responses to item 12 continued

This was one of the most interesting workshops I have attended. Suggestion: Incooperate a little more participation by D. A. instructors. Thanks for the pleasure of attending.

12. There was far too much material attempted in too short a time. Though much was gained by the conference—much more could have been gained—I appreciate the manual which I shall ingest and digest and absorb (I hope).

13. The idea is a good one. I think it should be mandatory for someone just starting to instruct. Some of the material was good but the radiology section was definitely lacking in any information that could be put to any practical use. I also felt that the laboratory section was dull. I did appreciate the opportunity of being a part of this conference for I feel that I am going away with some very helpful teaching methods. Thank you.

14. I thoroughly enjoyed the opportunity to meet with other educators from different types of schools. The sharing of ideas was most helpful to me as one with no format teacher training.

15. I feel that this program is of great value for any dental assisting educator. It was very beneficial to be told how to teach with many variations. During my 4 years of instructing I have received some of these subjects but it was never presented in this fashion. I feel that I acquired quite a bit of knowledge from this course but I wish it could have been longer.

16. These teacher conferences and workshops should definitely become at least an annual project for every dental assisting educator. The topics discussed here are essential and beneficial to the educator. It would have been nicer to have been taught new ideas on the hazards of ionizing radiation from Dr. Weurmann, or something substantial from such an expert. The objectives, methodology from the other lecturers would receive a clear and adequate evaluation from me. Thank you for a job well done.

17. I felt the workshop was extremely well organized along with being so punctual. It gave me many new ideas and I got to see how the other programs function. I did feel that the need for an actual example on how to teach a specific was needed. Also there could of been more time for group discussion. Thank you and I do hope to have the opportunity to attend future conferences and teachers' workshops.
New England's participants' responses to item 12 continued

18. The conference over-all was very informative and useful. As I said before, radiology could be eliminated, or designed toward teaching radiology.

I would enjoy more time left available for the group therapy sessions and exchange of ideas and knowledge. Very enjoyable-Thank you.

19. I thought the lectures on evaluation techniques, clinical procedures and objectives methods did help me and I understand objectives. I thought this conference was going to teach and instruct us how to teach and instruct.

I feel that the lectures in radiology and lab procedure didn't accomplish that. The lab lecture was good but it was like he was teaching his students.

Also there should have been more group discussions. I got to know about other programs and talked about mine.¹

¹American Dental Assistants Association, Teachers Conferences and Workshop Manual. (Chicago: Education Department, January, 1971), p. 6. (Section 5).
TO: Dental Assisting Programs Directors

FROM: Director of Education

SUBJECT: DENTAL ASSISTING TEACHER PREPARATION CONFERENCES AND WORKSHOPS - EVALUATION

I. The American Dental Assistants Association has received funds from the W. K. Kellogg Foundation to promote five dental assisting teacher preparation conferences and workshops. These programs are scheduled as follows: 1) two in 1971-June and August, 2) two in 1972-June and August, 3) one in 1973 and possibly another.

We would appreciate each dental assisting program director completing the following questionnaire which will help us to plan these proposed programs. Thanking you in advance.

1. Rank (1-5, with 5 being the highest rank) the areas of dental assisting that you feel would be of the most importance to dental assisting instructors who have had only a minimum of professional teacher preparation and teaching experience.

   ___ A. Teacher preparation
       Deriving course objectives
       Multiple approach to Methodology
       Multiple approach to evaluation

   ___ B. Clinical instruction
       Chairside assisting
       Sterilization procedure
       Demonstration and knowledge of tray set-ups
C. Laboratory Procedures
   Knowledge of materials
   Mixing impressions
   Knowledge of commercial laboratories

D. Office management
   Correspondence, telephone, appointments, billing
   Record keeping
   General office management

E. Interpersonal relations
   Assistant and employer
   Assistant and other employees
   Assistant and patients

2. Which of the following indicates your response to these proposed programs?
   __ A. Very badly needed
   __ B. Needed
   __ C. Sometimes needed
   __ D. Not needed

3. Which of the following indicates your choice concerning the development of course objectives in teaching dental assisting? (includes practice, i.e., application)
   __ A. Very badly needed
   __ B. Needed
   __ C. Sometimes needed
   __ D. Not needed

4. Which of the following suits your choice concerning providing participants of these programs with demonstration and information dealing with multiple approaches to instruction in dental assisting?
   __ A. Very badly needed
   __ B. Needed
   __ C. Sometimes needed
   __ D. Not needed

5. Which of the following indicates your response concerning demonstration, information and practical experience in utilizing a multiple approach to student evaluation?
   __ A. Very badly needed
   __ B. Needed
   __ C. Sometimes needed
   __ D. Not needed
6. Which of the following choices best indicates your feeling concerning your school's participation in these proposed teacher preparation programs? (All participants' expenses will be assumed by the American Dental Assistants Association, i.e., air and ground travel and per diem of $35 per day, two days)

A. Our school would like to participate in these programs
B. Our school would not like to participate in these programs

Please return the enclosed questionnaire to:

ADAA Director of Education
Suite 1230
211 East Chicago Avenue
Chicago, Illinois 60611

Name of School_________________________ State______________

Program Director______________________

Participants' Selection Criteria Will Consist of:

First Choice: Dental assisting educators without degrees
Second Choice: Dental assisting educators with associate degrees who have not had a course in six months
Third Choice: Dental assisting educators with baccalaureate degrees who have not had a course in the last year
TO: Participants of ADAA Teacher Conference and Workshops

FROM: Eugene Paulausky, ADAA Consultant

SUBJECT: DENTAL ASSISTING TEACHER WORKSHOP EVALUATION

To continue to provide the ADAA Department of Education with information concerning its dental assisting teacher training conferences and workshops, we would appreciate your completing the following requests (Thank you for your past and continued assistance.)

Assigned number ____________

Workshop attended: ______ Loyola _______ Boston

1. The dental assisting teacher training conference which you attended caused you to change your teaching technique for this year
   ______ Considerably
   ______ To some degree
   ______ Not at all

COMMENTS:

2. The material that you received at the dental assisting teacher training dealing with teaching essentials will be used
   ______ Considerably
   ______ To some degree
   ______ Not at all

COMMENTS:

3. Regarding increasing your self-confidence in the classroom, the ADAA teacher training workshop was
   ______ Considerably significant
   ______ Significant to some degree
   ______ Not at all significant

COMMENTS: (Why or why not)

4. As a result of the presentation and material received at the workshop, knowledge of teaching essentials, viz., deriving objectives, teaching methods, evaluation, and interpersonal relationships, was
   ______ Increased considerably
   ______ Increased to some degree
   ______ Not at all increased

COMMENTS:
5. Attending the ADAA teacher education conference and the material on teaching essentials has motivated you towards further teacher training in these areas:

- Considerably
- To some degree
- Not at all

COMMENTS: In what ways did the conference motivate you to further professional teacher preparation?

5a. If you have attended or if you are planning to attend professional teacher preparation courses, please list.

5b. If you have read texts dealing with professional teacher preparation, please list. (Also, if you have read texts listed in bibliography of the manual, please indicate.)

Please complete post-test included. Thank you.

Return to: American Dental Assistants Association
211 East Chicago Avenue
Chicago, Illinois 60611
TO: Dental Assisting Educators

FROM: ADAA Consultant, Eugene Paulausky

SUBJECT: PROFESSIONAL TEACHER PREPARATION

To continue to provide the American Dental Assistants Association's Department of Education with information dealing with dental assisting teacher education, please complete the following. (Thanking you in advance.)

1. As a result of your activity this summer, you plan to change your teaching techniques.

   ______ Considerably
   ______ To some degree
   ______ Not at all

   COMMENTS: (If you plan to change your teaching technique, indicate what brought about this change.)

2. The material you have read this summer concerning professional teacher training will be used in your teaching responsibilities for this year.

   ______ Considerably
   ______ To some degree
   ______ Not at all

   COMMENTS:

3. Activities engaged in during last summer have increased your self-confidence in your classroom:

   ______ Considerably
   ______ To some degree
   ______ Not at all

4. If you attended activities which dealt with professional teacher preparation such as deriving objectives, teaching methodologies, and evaluation, your knowledge in these areas has:

   ______ Increased considerably
   ______ Increased to some degree
   ______ Has not increased
   ______ Did not attend activity of this kind.

   COMMENTS:
5. The past summer's activities have motivated you to engage further in professional teacher preparation:

_______ Considerably
_______ To some degree
_______ Not at all

COMMENTS: (If you have been highly motivated in this what was the reason?)

INFORMATION

Education: _____ High School _____ 1 year Program _____ 2 years _____ B.S. _____ M.S.

Experience: Dental assisting years _____ Teaching years _____

Please complete the post-test enclosed. Use answer sheet.

Return to: American Dental Assistant Association
            Department of Education
            211 East Chicago Avenue
            Chicago, Illinois 60641
TO: Professional Educators

FROM: Director of Instructional Services, Eugene Paulausky

SUBJECT: Professional Teacher Preparation

In order to complete the data needed for my dissertation, I will need the following questionnaire completed. Thank you.

Indicate your position: _____ Superintendent _____ Other administrator
 _____ Principal   _____ Teacher

1. As a result of your activity last summer, you plan to change your teaching techniques or your administrative techniques.

   Considerably
   _______ To some degree
   _______ Not at all

   COMMENTS: (If you plan to change your teaching technique or administrative technique, indicate what brought about this change.)

2. The material you have read last summer concerning professional training will be used in your teaching responsibilities for this year or to assist you in your administrative role.

   Considerably
   _______ To some degree
   _______ Not at all

   COMMENTS:

3. Activities engaged in during the summer have increased your self-confidence in your classroom or as an administrator.

   Considerably
   _______ To some degree
   _______ Not at all

   COMMENTS:
4. If you attended activities which dealt with professional preparation such as deriving objectives, teaching methodologies, and evaluation, your knowledge in these areas has:

_______ Increased considerably
_______ Increased to some degree
_______ Has not increased
_______ Did not attend activity of this kind

COMMENTS:

5. The past summer's activities have motivated you to engage further in professional preparation:

_______ Considerably
_______ To some degree
_______ Not at all

COMMENTS: (If you have been highly motivated in this area, what were the reasons?)

INFORMATION

Education: _____ B.A./B.S. _____ M.A./M.S. _____ Ed.D. _____ Ph.D.

Experience: ___________Teaching years ___________Administrative years

Return to: Eugene Paulausky
Director of Instructional Services
2708 Vermont Avenue
Waukegan, Illinois 60085
APPENDIX E

AMERICAN DENTAL ASSISTANTS ASSOCIATION
TEACHER CONFERENCES AND WORKSHOPS
PRE-TEST MATERIAL
AND
POST-TEST MATERIAL

Compiled by:
The Education Department
American Dental Assistants
Association
211 East Chicago Avenue
Chicago, Illinois 60611

June 1971
INTRODUCTION

It is important that you fill out the information requested on the Pre-test Answer Sheet. You will notice that a number has been assigned to you. Please jot it down or remember it. This number will be the only means to identify your pre and post test scores. You will be sent the results of the pre and post testing. You should be able to determine by your test scores the growth you have made during the workshop experience.
Pre-Test  ADAA PRE AND POST TEST OF CONFERENCES AND WORKSHOP
Post-Test  ANSWER SHEET

Assigned Number  Scores
Indicate Level of Education  I. ___  IV. ___  DATE ________
High School  II. ___  V. ___
Junior College  I a Degree  III. ___  VI. ___
College  I 2 3 4 Degree  VII. ___  Total Score
Check Nearest Age:  20-25  26-35  Over 35

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I. The participants will be asked to make several decisions concerning the following instructional objectives by checking the response of their choice.

**Objective**

The student will write the five performance skills which will be presented as part of the information at this workshop.

1. In the objective stated above the student performance requested is:

   ___ A. The student will write  
   ___ B. The five performance skills  
   ___ C. As part of the information  
   ___ D. The performance skill which was presented

2. The content area of the stated objective is:

   ___ A. The student will write  
   ___ B. The five performance skills  
   ___ C. As part of the information  
   ___ D. The performance skill which was presented

3. The student performance level which is acceptable in the stated objective is:

   ___ A. The student will write  
   ___ B. The five performance skills  
   ___ C. As part of the information  
   ___ D. The performance skill which was presented

II. **Performance Level Skills**

The participants will be asked questions concerning several learning situations. You will be asked to decide which of the five performance skill levels the stated learning situation calls for.
4. The instructor wishes the dental assisting student to prepare impression material properly. Of the five student performance skill levels listed, which would be most important?

   A. Discrimination  
   B. Problem Solving  
   C. Manipulation  
   D. Verbal (includes writing)  
   E. Recall

5. The dental assistant is confronted with an angry patient. It seems that the patient's appointment was scheduled improperly. The performance skill most needed in this situation is:

   A. Discrimination  
   B. Problem Solving  
   C. Manipulation  
   D. Verbal (includes writing)  
   E. Recall

6. The dental assisting student is shown the central and lateral incisors. Later she is shown the cuspid. The performance skill sought is probably:

   A. Discrimination  
   B. Problem Solving  
   C. Manipulation  
   D. Verbal (includes writing)  
   E. Recall

7. The dental assisting student is introduced to office practice management. The skill most needed in meeting patients in the dental office is:

   A. Discrimination  
   B. Problem Solving  
   C. Manipulation  
   D. Verbal (includes writing)  
   E. Recall

8. The dental assisting student is told that her quadrant tray is not acceptable. The performance skill most needed in this situation is:

   A. Discrimination  
   B. Problem Solving  
   C. Manipulation  
   D. Verbal (includes writing)  
   E. Recall
III. **Learning Theories**

You will be asked to choose among the learning theories presented, the one which best fits the situation described.

9. The instructor assigns to the dental assisting student that she will have to write the names of all the teeth ten times. Which of the following learning theories is this request most in keeping with:

   ___ A. Innate ability theory  
   ___ B. Exercise theory  
   ___ C. Trial and error theory  
   ___ D. Learning through senses theory  

10. Given several cues the student is to determine the means of solving a particular mixing of amalgam problem. The student concentrates on the problem and the cues, then she acts. The learning theory which most accurately fits this situation is:

   ___ A. Innate ability theory  
   ___ B. Exercise theory  
   ___ C. Trial and error theory  
   ___ D. Learning through senses theory  

11. A student feels she is a failure at taking impressions. She has all but given up. The learning theory which most appropriately explains her present situation is:

   ___ A. Innate theory  
   ___ B. Exercise theory  
   ___ C. Trial and error theory  
   ___ D. Learning through senses theory  

12. The dental assisting student repeats to herself "all the adult teeth five times in an effort to learn their names and recognize their structure. She also uses a chart for the same purpose. When she is at home, she experiments with the family concerning the naming and identification of adult teeth. The learning theory which best fits this student's approach is:

   ___ A. Innate theory  
   ___ B. Exercise theory  
   ___ C. Trial and error theory  
   ___ D. Learning through senses theory
IV. Testing

You will be asked to choose among several responses the one that you feel is most appropriate as related to information and procedures used in testing.

13. The best way to evaluate a student's progress in through:

   ___ A. Paper and pencil testing
   ___ B. Written observation
   ___ C. Oral examinations
   ___ D. Discussion with student
   ___ E. Eclectic methods (Multiple approach)

14. The two most important considerations in testing are:

   ___ A. The selection of test items and test length
   ___ B. The process of administering and scoring
   ___ C. The physical and mental aspects of the situation
   ___ D. The test population and the instructor.

15. The most important aspect of any test is:

   ___ A. Items
   ___ B. Scoring
   ___ C. Reliability
   ___ D. Validity

16. The best way to improve the results of an essay test is to:

   ___ A. Give the student several choices in the test
   ___ B. Increase the number of responses of the test
   ___ C. Have two people score the test
   ___ D. Score all similar responses first and then go on to the next response

17. If a test does what it is supposed to do, it is said to have good:

   ___ A. Reliability
   ___ B. Validity
   ___ C. Items
   ___ D. Concurrent validity

18. Essay examinations can best be improved by:

   ___ A. Defining the answer desired
   ___ B. Requesting several short answers
   ___ C. Lengthening the testing period
   ___ D. Providing the student with several choices
19. The most important criticism of true and false items is:

___ A. True and false statements are hard to write
___ B. True and false items limit student responses
___ C. True and false items reveal no depths of student knowledge
___ D. True and false items encourage guessing

20. Matching items can be improved by:

___ A. Having the choice column twice as long as the column to be matched
___ B. Challenging the student's memory by stating the words of the choice column carefully
___ C. Using illustrations in the choice column instead of words
___ D. Stating the choice column with well selected incorrect possibilities

21. The test which provides greater sampling of the depth of learning is:

___ A. Oral
___ B. Essay
___ C. Multiple Choice
___ D. Fill-ins

22. The greatest advantage of the multiple choice items:

___ A. More material is sampled
___ B. Administering the test is easier
___ C. Scoring the test is more accurate
___ D. Results are more easily interpreted

V. Physical and Psychological Factors

Physical and psychological factors affecting communication are numerous and varied. In this group of questions you will be asked to identify these physical and psychological factors.

23. Which of the following is not a physical factor

___ A. Food
___ B. Shelter
___ C. Sleep
___ D. Recognition
24. A dental assisting student's grades begin dropping. Her attitude is suddenly changing concerning her studies. She no longer appears interested in the subject. Which of the following problems describes best her change in attitude?

___ A. Social problems
___ B. Economic problems
___ C. Physical problems
___ D. Psychological problems

25. Psychological drives are difficult to satisfy because:

___ A. They can not be fulfilled completely
___ B. There are several interacting at the same time
___ C. They are socially restrained and unacceptable
___ D. They are not even clear to the individual involved

VI. Silent Language

Silent language and non-verbal communication involves culture and gestural or body movements. These factors constitute a great deal of the communicative process. You will be asked to check the response you feel to be most accurate in the situations either described or illustrated for you.

26. Which of the following cultural factors would probably have the most influence on the effectiveness of a communication?

___ A. Time
___ B. Space
___ C. Values
___ D. Appreciation

27. Two people are talking. One person appears irritated by the other's insistence on nearness when they talk. The problem is probably one of:

___ A. Topic of discussion
___ B. Aggressiveness of the speaker
___ C. Nationality differences
___ D. Language difficulties

28. A person trying hard to make his point is likely to evoke from his listeners:

___ A. Discomfort
___ B. Disconcern
___ C. Annoyance
___ D. Aggression
This person is expressing:

___ A. Disgust
___ B. Hopelessness
___ C. Disagreement
___ D. Boredom

These two people are expressing:

___ A. Agreement
___ B. Disagreement
___ C. Interest
___ D. Distrust

These two people are expressing:

___ A. Agreement
___ B. Disagreement
___ C. Interest
___ D. Distrust

VII. Semantics

Semantics is the study of language development and how it affects the physical and mental make-up of people. You will be asked to choose the response that you feel best fits the situation described.

32. A person's attitude about himself is most strongly influenced by:

___ A. His successes and failures
___ B. What other people say about him
___ C. His status in the community
___ D. His religious convictions

33. The greatest problem with words is the fact that:

___ A. They never fully describe an object or situation
___ B. They are misinterpreted by others
___ C. They have several possible meanings
___ D. Too many people accept them as truth
34. Words that have several possible meanings are apt to be:

   ___ A. Given individual interpretation  
   ___ B. Applied as absolute truth  
   ___ C. Given too much emphasis  
   ___ D. Used to describe concrete objects

35. The best way to prove a statement is to:

   ___ A. Consider all possibilities  
   ___ B. Use an empirical approach  
   ___ C. Have several people discuss it  
   ___ D. Study the words used within it
I. You will be asked to respond to questions concerning the following student behaviorally stated objectives in terms of the instruction that you have received at this teacher conference. Choose the response which best answers the question asked.

Objectives

The dental assisting student through writing will demonstrate her ability to use discriminatory and problem solving skills by correctly diagnosing the reasons for an improper impression mixture as being the result of manipulation or ingredient factors.

1. Which of the following best states the student's behavior called for in the preceding objective?

   __A. The student will demonstrate her ability through writing
   __B. To use discriminatory and problem solving skills
   __C. Correctly diagnosing reasons for improper mixture
   __D. As being the result of faulty manipulation or ingredient factors

2. Which of the following discloses the terminal behavior of the stated objective?

   __A. The student will demonstrate her ability through writing
   __B. To use discriminatory and problem solving skills
   __C. Correctly diagnosing reasons for improper mixture
   __D. As being the result of faulty manipulation or ingredient factors

3. Which of the following best fits the criterion aspect of the stated objective?

   __A. The student will demonstrate her ability through writing
   __B. To use discriminatory and problem solving skills
   __C. Correctly diagnosing reasons for improper mixture
   __D. As being the result of faulty manipulation or ingredient factors

II. Performance Skills Level

You will be asked several questions concerning various learning situations. You will be asked to check the performance skill most needed to complete the task called for in the situation.
4. The dental assisting student is asked to pick out the maxillary molars from a line of teeth which has both the maxillary and mandible molars displayed.

The most appropriate skill or skills needed (is or are):

___ A. Problem Solving
___ B. Manipulation
___ C. Discrimination
___ D. Recall
___ E. Verbal (including writing)

5. The dental assistant student has completed the trituration of amalgam but the mixture is not suitable. The skill or skills needed to correct the situation (is or are):

___ A. Problem solving
___ B. Manipulation
___ C. Discrimination
___ D. Recall
___ E. Verbal (includes writing)

6. The dental assisting student is shown several types of dental forceps and she is asked to name them. The skill or skills needed (is or are):

___ A. Problem solving
___ B. Manipulation
___ C. Discrimination
___ D. Recall
___ E. Verbal (includes writing)

7. The dental assisting student is asked to list three impression materials disclosing the strong and weak points of each. The skill or skills needed (is or are):

___ A. Problem solving
___ B. Manipulation
___ C. Discrimination
___ D. Recall
___ E. Verbal (includes writing)
8. The dental assisting student is given a bank statement and dental office record statement that do not agree. The skill or skills needed (is or are):

___ A. Problem solving
___ B. Manipulation
___ C. Discrimination
___ D. Recall
___ E. Verbal (includes writing)

III. Learning Theories

You will be asked to choose among the learning theories, which were presented to you, the one that you feel best fits the situation.

9. A student's impression mixture has turned out unacceptable. The student pushes back from her work and becomes very quiet. Suddenly she resumes mixing the impression material and after changing several ingredients the mixture is acceptable.

Which of the following best indicates the learning theory used by this student?

___ A. Innate learning theory
___ B. Trial and error learning theory
___ C. Exercise learning theory
___ D. Learning through senses theory

10. The student feels that she is too clumsy at passing instruments in the chairside aspect of the dental assisting program. One day the instructor comments about her inability. The student becomes progressively worse at this endeavor and she has developed the concept that she will never be proficient in instrument transfer.

Which of the following learning theories would best describe her present attitude?

___ A. Innate learning theory
___ B. Trial and error learning theory
___ C. Exercise learning theory
___ D. Learning through senses theory
___ E. Eclectic approach to learning
11. This same student that was described previously decides to remedy her problem at chairside by repeating and repeating each instrument transfer move.

Which learning theory best describes the present activity of this student?

___ A. Innate learning theory
___ B. Trial and error learning theory
___ C. Exercise learning theory
___ D. Learning through senses theory

12. After considerable time and effort have elapsed, the student still cannot transfer instruments properly. She decides to think about the dilemma and does so for several days. Then she decides to do wrist and finger exercises hoping to gain proficiency of movement. Finally she decides to concentrate on the procedures involved using touch and sight as aids in making successful instrument transfers.

Which of the following learning theories is the student possibly utilizing?

___ A. Innate learning theory
___ B. Trial and error learning theory
___ C. Exercise learning theory
___ D. Learning through senses theory

IV. Testing

Choose the response that you feel best fits the stated information which is related to the evaluation aspect of this program.

13. The most appropriate way to evaluate a student's progress is through:

___ A. Paper and pencil test
___ B. Anecdotal records
___ C. Auditory examinations
___ D. Student conferences
___ E. Multiple evaluation criteria
14. It has been stated that standardized tests are best for measuring a certain pupil's trait.

Which of the following are the two most important aspects of a standardized test?

___ A. The physical aspect of the room and student's mental condition
___ B. The way the test is presented and scoring
___ C. The clarity of directions and item choices
___ D. The person who presents the test and the students

15. In order for a test to be useful, it must have:

___ A. Validity
___ B. Subjectivity
___ C. Reliability
___ D. Objectivity

16. Essay tests have been criticized for many reasons, but the major criticism has been with scoring these examinations.

Which of the following responses would be the best technique for making the results of the essay examination more valuable?

___ A. Give the student several choices
___ B. Increase the number of responses
___ C. Have two people score the test
___ D. Score one response at a time and then go on to the next

17. Unless a test does what it is intended to do, it is worthless.

Which of the following indicates this most important aspect of testing?

___ A. Validity
___ B. Construct validity
___ C. Face validity
___ D. Predictive validity

18. Which of the following responses would be the best means of improving an essay examination?

___ A. Defining the answers desired
___ B. Make the exam period longer
___ C. Require several short answers
___ D. Increase the student's choices
19. Which of the following best describes the criticism of the true and false items?

___A. True and false statements are hard to write
___B. True and false statements only require recall
___C. True and false items encourage guessing
___D. True and false items discriminate against the knowledgeable student

20. Which of the following would improve the value of matching items on an examination?

___A. Double the length of the choice column
___B. List the distractors carefully
___C. Use pictures in choice column
___D. State the choice column so that greater depth of knowledge is needed by the student

21. Oral examinations are not used to any great extent. However, these exams are worthwhile even though they require much time and a one to one ratio. 

Which of the following is the greatest advantage of the oral test?

___A. It measures communicative skill
___B. It measures specific knowledge in depth
___C. It measures a greater content area
___D. It measures student personality to a degree

22. The multiple choice list item is the most popular among the majority of educators. There are many reasons for this apparent appeal, but there is one reason which stands out from all the others.

Which of the following best describes the greatest advantage of the multiple choice item?

___A. Greater content area can be explored
___B. Giving the test is easier
___C. A better interpretation of results can be made
___D. Scoring the results is more accurate
V. Physical and Psychological Factors

Many factors influence the communicative process. Among these factors are physical and psychological needs which must be met by every individual.

These two factors should be understood by educators in order that their students adequately meet the level which the physical and psychological factors demand.

23. Which of the following is a psychological factor?

___ A. Food
___ B. Sleep
___ C. Recognition
___ D. Sex

24. Many times, physical and psychological drives become intermixed. The most crucial psychological problem caused by not adequately satisfying a physical drive in later life is:

___ A. Rest
___ B. Sex
___ C. Hunger
___ D. Shelter

25. The greatest problem with satisfying psychological drives is:

___ A. Complete satisfaction is impossible
___ B. Many reside at the subconscious level
___ C. Social behavior demands rigid restraints
___ D. Several interacting at the same time

VI. Silent Language

Recently studies have been made concerning the importance of culture and gestural language in communication. You will be requested to check responses related to these two areas.

26. The greatest obstacle presented by different cultures is the concept of:

___ A. Time
___ B. Space
___ C. Values
___ D. Appreciation
27. Many people feel that a person is aggressive if he (she) stands too close while speaking.

Which of the following best describes the problem involved in the narrative presented above?

___ A. Discussion topic
___ B. Language of speaker
___ C. The setting of the experience
___ D. Difference of nationality

28. It was demonstrated that the prey often attack the predator when the predator invades their territory. The message for educators could be:

___ A. Be firm but fair with students
___ B. Reprimand only the offenders
___ C. Use threats sparingly with students
___ D. Use several approaches to discipline

29. Choose the response which best fits the illustration:

This person is exhibiting:

___ A. Aggressive behavior
___ B. Conciliatory behavior
___ C. Reclusive behavior
___ D. Non-communicative behavior

30. In this illustration, the person is exhibiting:

___ A. Aggressive behavior
___ B. Conciliatory behavior
___ C. Reclusive behavior
___ D. Non-communicative behavior

31. This group of people according to the illustration, are:

___ A. In agreement
___ B. In disagreement
___ C. Closed group
___ D. Open group
VII. **Semantics**

Semantics deals with the language and how it affects the physical and psychological well-being of humans. You will be asked to respond to situations based on a semantic approach.

32. Which of the following is the best means to clarify a situation?
   
   ____ A. Consider those elements involved  
   ____ B. Use an empirical approach  
   ____ C. Decide each step separately  
   ____ D. Use your intuition

33. A person who has had many more successes than failures tends to develop an attitude of himself as being:
   
   ____ A. Self-confident  
   ____ B. Egotistic  
   ____ C. Self-righteous  
   ____ D. Self-motivated

34. According to the information presented to you, the use of words may be responsible for:
   
   ____ A. Economic success  
   ____ B. Mental health  
   ____ C. Physical health  
   ____ D. Explanation of objects

35. According to the information presented to you concerning language, the greatest problem with words which are not based on natural objects is the fact that:
   
   ____ A. They can distort the truth  
   ____ B. They can be considered as absolute statements  
   ____ C. They can be used to gain selfish ends  
   ____ D. They have several meanings
The dissertation submitted by Eugene E. Paulausky, has been read and approved by members of the faculty of the Graduate School.

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any changes have been incorporated and that the dissertation is now given final approval with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Date 14, 1978

Signature of Advisor