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AUTHOR	Cryan, John R.; And Others
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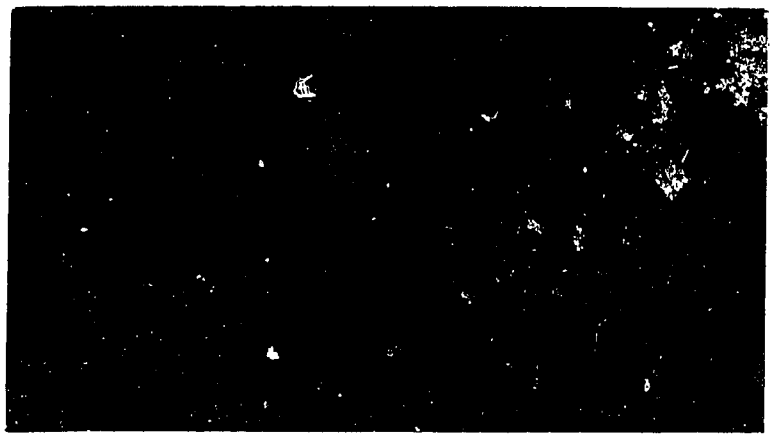
ABSTRACT

This report is concerned with investigation of the personal characteristics of students entering the teacher education program at the University of Georgia, Elementary Education Division. Information regarding undergraduate students admitted to the division's program in teacher preparation at the elementary, early childhood, and middle school levels was collected. Since admission is allowed at various points in the academic sequence, the entering groups during the fall, winter, and spring semesters 1974-75 included freshmen, sophomores, and juniors. A total of eight instruments were used to obtain data. This information included the students' former environment, experience, and performance; the students' intellectual aptitudes; the students' personality characteristics, values, beliefs, and attitudes; and, additionally, the students' reactions to certain educational concepts. The value of the data collected lies in its comparative uses and its use in follow-up studies planned by this research group. (DMT)

PROGRAM RESEARCH AND EVALUATION REPORT



Elementary Education Division
College of Education
University of Georgia
Athens, Georgia 30602

SECOND REPORT OF THE COMMITTEE ON PROGRAM RESEARCH AND EVALUATION

JULY, 1976

John R. Cryan, Ph.D.
Charles E. Johnson, Ed.D.
Horace C. Hawn, Ph.D. Chairman

Elementary Education Division
College of Education
University of Georgia
Athens, Georgia 30602

During the six-month period following the publication of the Initial Report of the Committee on Program Research and Evaluation (Hawn, 1975) the Research and Evaluation Committee along with other staff members of the Elementary Education Division, University of Georgia, engaged in a number of activities relative to the target objectives. Three major investigation efforts embraced the total of these activities, as follows: (a) obtaining, consolidating, reviewing, and assessing personal data concerning the students enrolled in the teacher education program; (b) developing and refining the research and evaluation model design; and (c) obtaining, consolidating and summarizing data relative to the manner in which each of the various aspects of the instructional program are conducted.

This report is concerned only with the investigation of the personal characteristics of students entering the program. It describes the investigation procedures, presents the findings, and discusses the implications of the findings based on the available data at the time this report was prepared.

Subsequent reports will concern themselves with activities relative to developing and refining the research and evaluation model, and to summarizing information concerning the instructional program.

Procedures

The data-gathering program began in the fall quarter 1974 and continued through the winter and spring quarters. Its purpose was to collect information regarding undergraduate students being admitted to the division's program in teacher preparation at the elementary, early-childhood, and middle-school levels. Because admission regulations allow entrance to these programs at various points during the academic sequence, the entering group included

freshman, sophomores, and juniors. Table 1 shows the numbers of entering students by collegiate level as well as by the academic quarter in which they were admitted.

Table 1

Distribution of Numbers of Entering Students for Whom Personal Data Were Obtained and Recorded, 1974-1975, for Program Evaluation Investigation Activities

Classification of Students	Numbers of Entering Students			
	Fall Qtr.	Winter Qtr.	Spring Qtr.	Totals
Freshman	72	8	1	81
Sophomores	19	7	2	28
Juniors	16	1	9	26
Seniors			2	2
Totals	107	16	14	137

A total of eight instruments was used in the study to obtain data concerning the personal characteristics of these entering students. Based on preliminary investigations involving the entire division staff, in which the kinds of essential data were designated, these instruments provided a wide variety of information regarding the personal characteristics of each student. This information included the student's former environment,

experience and performance; the student's intellectual aptitudes; the student's personality characteristics, values, beliefs and attitudes; and additionally the student's reactions to certain educational notions and concepts. Table 2 lists the instruments used to obtain the data and, in general, describes the kinds of information provided by each.

Table 2

Instruments Used to Obtain Data on Students Entering the Programs

University of Georgia Entering Student Information Inventory, Form EEL - 74 Source: Program Research and Evaluation Committee, Elementary Education Division, The University of Georgia, Athens, Georgia 30602	General information concerning the students' backgrounds, including school experiences, leadership opportunities, college programs, grade-point averages, scholarships, work experiences, and family origins.
California Test of Mental Maturity, Form S, Level 5 Source: McGraw Hill, Inc., Monterey, California 93904	Measures of the mental abilities of individual students.
Sixteen Personality Factor Questionnaire Author: Raymond B. Cattell Source: Institute of Personality and Ability Testing, Champaign, Illinois 61820	Descriptions of the personal attributes of individual students.
Personal Beliefs Inventory Author: Bob Burton Brown Source: The Experimental Mind in Education. N.Y.: Harper and Row, 1968, pp. 82-87	Indications of the extent to which students agree or disagree with selected philosophical notions.
Teacher Practices Inventory Author: Bob Burton Brown Source: The Experimental Mind in Education. N.Y.: Harper and Row, 1968, pp. 87-96	Indications of the extent to which students agree or disagree with commonly observed teaching practices.
Rokeach Dogmatism Scale Author: Milton Rokeach Source: The Open and Closed Mind. N.Y.: Basic Books, Inc., 1960	Measures of the extent of "openness or closedness" expressed by students while reacting to statements which challenge their belief-disbelief system.

Value Survey, Form D Author: Milton Rokeach Source: Halgreen Tests, Sunnydale, California 94087	Information concerning the personal and social values of individual students.
University of Georgia Semantic Differential Inventory, Form EEL - 1975 Source: C. Osgood, F. Suci, and P. Tannenbaum. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.	Indications of students' perceptions and "feelings" toward selected concepts (persons and things) commonly associated with an educational environment.

At the start of each academic quarter for the 1974 school year, beginning with the fall quarter, entering students were advised by letter of their opportunity to participate in this investigation. While all were encouraged to do so, they also were informed that participation was not a requirement. The "trade-offs" for their participation were guaranteed confidentiality of the data and an opportunity for the students to discuss the findings of the study with qualified persons, other than their instructors or program advisors, as these findings pertained to them individually. A majority of the students chose to participate.

Four two-hour sessions held in the evening on days early in the week were successful in obtaining data from most of the students at the start of the fall quarter. Each student had to attend only two of the four sessions to provide his/her data. Small-group and individual make-up sessions were scheduled for students unable to attend the large-group sessions. During the winter and spring quarters, when fewer students were involved, smaller and more frequent data-producing sessions were held during the working day. These were so scheduled as to accommodate the existing time involvements of both students and proctors.

During the planning phases of the investigation a search was made

for a suitable computer program, which would meet at least two important criteria. First, such a program would have a storage system permitting the continued feeding of data since it was recognized that, in the future, the capacity to add data on new subjects each quarter as well as to add new data on previously recorded subjects would be necessary. Second, such a program would have a storage system suitably allied with retrieval systems so that selected items of data could be brought forth whenever needed for analysis. This second criterion was deemed necessary since it was recognized that the investigation would pose a variety of research questions; thus, at some times it would seek simply to analyze descriptive, factual data concerning the students while at other times it would seek to determine the significance of multiple relationships among the characteristics of the students over a specified period of time.

Although computer programs meeting these two criteria are available, no decision has been reached regarding use of a particular one in the study. It does not appear necessary to make such a decision at the present time, however, since this first phase of the investigation is concerned only with descriptive information focusing on the question: What are the characteristics of those students admitted to the University of Georg teacher education programs preparatory to teaching children? At present no sound reasons exist for asking questions of greater depth since longitudinal data are not available for comparisons; data are available only for a relatively small number of students; and information regarding the various program sequences in which the students have enrolled is yet to be summarized.

A total of 130 data bits providing descriptive information on each student participating in the investigation was fed into the computer, the program

used to process the data being designated by the title; BMDO1D SIMPLE DATA DESCRIPTION REVISED JANUARY 5, 1971 HEALTH SCIENCE COMPUTING FACILITY UCLA. Once processed and reported, the data were analyzed and the findings were consolidated around specific points of inquiry. Inferences and tentative conclusions then were drawn from the findings.

University of Georgia Entering Student Information Inventory

A longitudinal study of the magnitude attempted by the committee necessitated the availability of complete descriptive data regarding each participant. These data included biographic and demographic information plus previous education and career-related experiences, career aspirations, expectations regarding teaching strengths and weaknesses, and type of program in which each student was enrolled within the division. The instrument described was designed by the committee for use in obtaining these data.

The Entering Student Information Inventory is a twenty-four item instrument. Most of the responses are provided by the students individually or in group sessions. The items include:

a. Name
b. Identification number
c. Sex
d. Race
e. Year of birth
f. Place of birth (state)
g. Marital status
h. Number of children
i. Self-judged socioeconomic status for him/herself
j. Date he/she entered UGA teacher education program
k. Area of teacher education (i.e., elementary, early childhood, or middle school)
l. Type of program in which enrolled (i.e., conventional, competency-based, or field-staged)
m. Name of program advisor

n. If a transfer student from another college, information concerning the transfer
o. Experiences working with children
p. Self-judged condition of his/her own health
q. Attitude toward the teaching of particular school subjects
r. Career aspirations

Items of information gleaned from sources other than the student and also included on the inventory are:

a. Total number of accumulated college credit at time of admission to the program
b. Accumulative college grade-point average at time of admission to the program
c. Scholastic-Aptitude-Test scores from high school
d. Accumulative high school grade-point average at time of high school graduation
e. Scores obtained on the Georgia Regents Examinations (statewide examinations for all sophomores in state-supported colleges and universities in Georgia)

At present, scoring procedures for the inventory are by hand. (Budget considerations have precluded the design and use of a mark-sensing scoring sheet.) Data are transferred directly from the instrument to computer forms for processing. The computer program is designated by SPSSA-Version 6.0. It reveals standard descriptive statistics.

Based upon a sample of 137 students entering the division during the 1974-75 school year, the following summary statements are made:

a. Most of the students (95%) are single, white females, nineteen years of age or younger. (There are only 4 male students and 4 black students.)

b. Slightly more than half of the students (54%) were born in Georgia; only 19% were born outside the Southeast.

c. Nearly all of the students describe their health as excellent.

d. The vast majority (84%) of the students describe their family's socioeconomic status as middle class.

e. Fifty-two percent of the students are transfers to the University of Georgia from other institutions, and one-third of this percentage come from colleges and universities outside the state of Georgia.

f. Whereas the required grade-point average for entry into the division is 2.25, the average for the students - typically based upon 62 accumulated quarter hours of credit - is 2.68.

g. High school grade point for the students average 2.9.

h. High school Scholastic-Aptitude-Test scores for the students are within the average range, with a mean verbal score of 441 and a mean mathematics score of 462.

i. Approximately 70% of the students indicate a preference for majoring in elementary education; about 25% choose to major in early childhood education while about 5% choose to major in middle-school education.

j. Most of the students have had prior experiences in working with children. Babysitting was mentioned by 96%, while over 50% have worked with children in church and/or Sunday school, and a surprising 35% have been teachers' aides.

k. In addition to activities involving work with children, nearly 60% of the entering students indicate having served in leadership roles in college (e.g., sorority officer, class officer, athletics, cheerleading, etc.).

California Test of Mental Maturity

As current educational literature indicates, agreement has not yet been reached concerning the extent to which measures of intellectual development relate to success in teaching. On the one hand, there are those who consider a "substantial I.Q." necessary for a student to successfully satisfy the demands of a conventional teacher education college program. On the other hand, there are those who consider an "I.Q." derived from raw scores obtained on a standardized group test of mental maturity a very unreliable predictor of the success for a college student preparing to enter the teaching profession. This issue was of considerable concern to staff members of the division as they reviewed the plans of the investigating committee. Most staff members expressed doubt regarding the use of the I.Q. as a predictor of professional success. Due to these conflicting notions and a dearth of

evidence, it was decided that a need existed to further investigate this issue and that the present longitudinal study would be an appropriate one in which to obtain the necessary data.

The California Short-Form Test of Mental Maturity was selected. The criteria used by the committee included: (a) recommendation by specialists in tests and measurement, (b) ease of administration, (c) ease of scoring, (d) provision of separate subtest scores, and (e) use by other institutions of higher learning.

The specific form of the test used was 1963 S-Form, Level 5, consisting of 120 multiple-choice items. This form is designed for group administration and is suitable for college-age persons.

The test purports to assess four factors by means of seven subtests. The first factor, logical reasoning, is measured by opposites, similarities, and analogy-type problems in picture form; and the second factor, numerical reasoning, by test of numerical values and by number problems. The third factor, verbal concepts, is assessed by verbal comprehension items; and the fourth factor, memory, by a test of delayed recall. The test also is sub-divided to measure language as contrasted with nonlanguage skills. The tests which were concerned with the nonlanguage factor focused on opposites, similarities, analogies and numerical values and the tests concerned with number problems, verbal comprehension and delayed recall yield the language factor score.

Table 3 compares the scores obtained by 130 students entering the division during the 1974-75 school year with the national norms for the adult population on the California Test of Mental Maturity (1963 S-Form, Level 5). Percentiles show that the means of the raw scores for this

student group fall well within the upper quartile of the national adult-population distribution on all variables except those concerned with reasoning, where they border the quartile minimum by only a few points. In addition, I.Q. equivalents are well above the midpoint for the factors of language (114) and non-language (114), and for the combined indicator (117).

Table 3

Comparison of scores Obtained by 130 Teacher Education Students (entering programs at the University of Georgia for the preparation of teachers of children) and National Norms for the Adult Population on the CTMM (1963 S-Form, Level 5)

Variable	Mean Raw Score	Range	S.D.	SE of Mean	Percentile of Adult Population	I.Q. Equivalent
Logical Reasoning	28.70	25.00	4.84	.43	75	-
Numerical Reasoning	15.60	19.00	3.73	.33	73	-
Verbal Concepts	15.85	20.00	3.91	.34	82	-
Memory	18.82	17.00	3.70	.32	82	-
Language	38.41	36.00	7.16	.63	83	114
Non-language	40.49	30.00	6.16	.54	82	114
Total	78.90	60.00	11.60	1.01	86	114

In interpreting these data it must be kept in mind that the subjects were entering students, not graduating students or even established seniors, thus, it is likely that many will not complete the programs they have entered. Those teacher educators who regard a high I.Q. as an essential for successful completion of a college program may be comforted by the observation that the range of 60 points in raw scores represents an I.Q. of 139 at the top of the distribution and an I.Q. of 79 at the bottom. Also, records reveal that — since these test scores were obtained — a number of students in the lower quartile of the I.Q. distribution have found it necessary, for a variety of

reasons, to withdraw from the programs in which they were enrolled

Sixteen Personality Factor Questionnaire (16 PF)

The committee was agreed that insofar as it was feasible with existing instruments, all identifiable personality characteristics of entering students should be investigated. It was believed that such a comprehensive approach might, at some future point, provide evidence making it possible to identify specific personality characteristics which tend to be associated with effective and with ineffective teaching of particular subject matter and/or classes of learners.

A review of available instruments led the investigators to select the Sixteen Personality Factor Questionnaire (16 PF) as one means of accomplishing this objective. Generally, it was agreed by the members of the division staff and by the investigating committee that the claims regarding the 16 PF are acceptable; according to these claims, "It is designed to make available, in a practicable testing time, information about an individual's standing on the majority of primary personality factors . . . on the total human personality sphere . . ." (Cattell et al., 1970, p.1). Also, a review of research efforts in this area of teacher education programs suggested that this instrument was being used in a number of institutions of higher learning. Thus, the committee felt that opportunities might some day arise to compare the findings of this investigation with those of similar studies at other institutions.

The 16 PF is a multiple-choice instrument, with 187 items, which can be administered to groups as well as to individuals. It is intended for young adults and requires about 45 minutes to complete. Scoring, either by hand or

by machine, sorts for two sets of eight factors. The score for each factor is a standard summation.

Table 4 lists the 16 personality factors for which data are provided. The letters used as indicators for the 16 factors are the same as those used on the test and in the handbook (Cattell et al., 1970). The names given in the table are the technical referents; those in parenthesis are less technical near-equivalents used in the handbook, where a more extensive description of each of the 16 characteristics is provided. Also, it must be mentioned that six to nine broader second-stratum factors have been derived from and accompany the 16 personality characteristics, and, although these are not considered here, further study may suggest that they should be investigated.

For purposes of reporting and analysis, the raw scores provided in response to the 16 PF are transformed into stens. Numerous advantages are claimed by Cattell for adopting this system of scoring (1970, p. 62-65). The term sten is derived from standard ten. It regards the raw score mean of the population as the central value and establishes ten equal-interval scale units on the basis of a normal distribution. The mean score is represented by a sten of 5.5, and the range within each sten is one-half of one standard deviation. For example, the lowest sten is the equivalent of a standard score of -2.5 through -2.0, and so on through the highest sten, 10, which includes scores ranging from +2.0 through +2.5. For this reason, the authors hold that the range of what essentially would be termed "average," "normal" scores — namely, a one-sigma range, centered on the mean — is represented by stens 5 and 6; consequently, only when stens of 4 and 7 are obtained should a person definitely be regarded as "departing from the average" (Cattell et al., 1970, p. 63).

Table 4

Primary Source Traits Identified by the 16 PF

Factor Referent	Characteristic for Low Score	Characteristic for High Score
A	Sizothymia (Reserved, detached)	Affectothymia (Warmhearted, outgoing)
B	Low Intelligence (Dull)	High Intelligence (Bright)
C	Emotional Instability (Affected by feelings)	Higher Ego Strength (Emotionally stable)
E	Submissiveness (Humble)	Dominance (Assertive)
F	Desurgency (Sober, taciturn)	Surgency Enthusiastic (Happy-go-lucky)
G	Low Superego Strength (Expedient)	Superego Strength (Conscientious)
H	Threctia (Shy, timid)	Parmia (Adventurous, socially bold)
I	Harria (Tough-minded)	Premi[illegible]ender-minded)
L	Alaxia (Trusting)	Protension (Suspecting)
M	Praxernia (Practical)	Autia (Imaginative)
N	Naivete (Forthright, unpretentious)	Shrewdness (Astute, worldly)
O	Untroubled Adequacy (Placid, self-assured)	Guilt Proneness (Apprehensive, self-reproaching)
Q_1	Conservatism of Temperament (Respecting established rules)	Radicalism (Experimenting, liberal)
Q_2	Group Adherence (Group dependency ("a joiner")	Self-suffiency (Resourceful, prefers own decisions)
Q_3	Low Self-sentiment Integration (Uncontrolled)	High Strength of Self-sentiment (Controlled, exacting willpower)
Q_4	Low Ergic Tension (Relaxed, tranquil)	High Ergic Tension (Tense, frustrated)

16

Table 5 shows the mean scores for entering University of Georgia female students (since there were only four male students, their scores were omitted) and for 1280 female elementary-level teachers reported by the authors in the handbook (1970, p. 185). Examination reveals that the mean scores for both groups fall within the "normal" range. However, two notable differences between the groups' responses can be detected as follows: (a) on ten of the characteristics, the entering students rate above the classroom teachers; and (b) on three of the characteristics, the discrepancy between mean scores for the student group and mean scores for the teacher group is approximately one or more stens. This suggests a difference of one-half of one point standard deviation between the distributions. The three characteristics showing this difference were: (a) affected by feelings vs. emotionally stable, (b) uncontrolled vs. controlled, and (c) relaxed vs. tense.

Figure 1 profiles three students whose raw scores are typical of the extent to which the scores of individual students varied relative to particular personality characteristics. It may be observed that the scores of these three students show wide variance. This is true of the vast majority of the student responses obtained.

Table 5

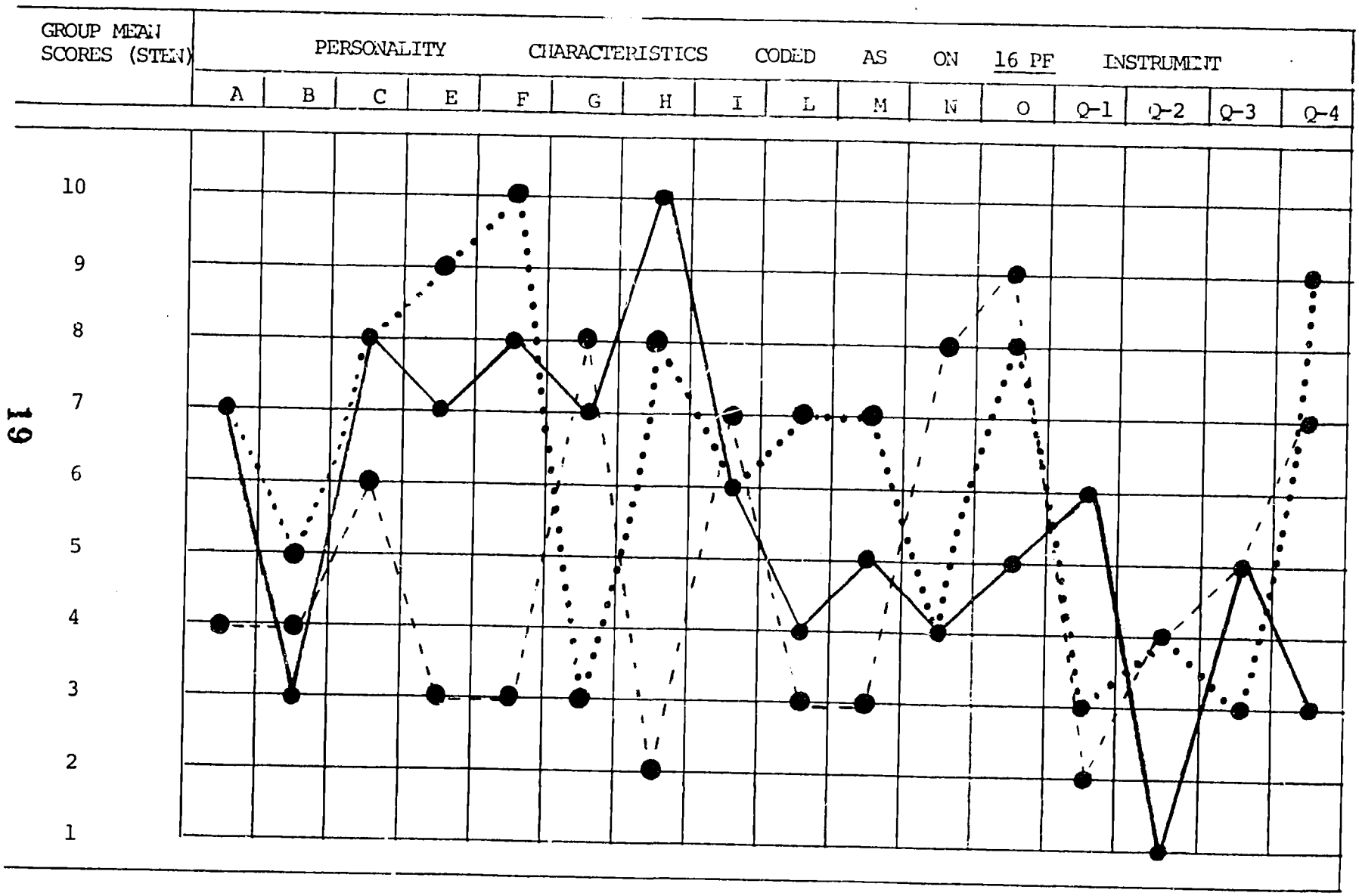
Means Scores on 16PF Comparing Students
Entering Division of Elementary Education
and Elementary Teachers (Cattell et al., 1970, p. 185)

Factor	Entering Students[a]		Elementary Teachers[b]	
	M	SD	M	SD
A	5.6	1.8	5.6	1.8
B	6.0	2.1	6.5	1.8
C	6.0	1.7	5.0	1.7
E	6.3	2.0	5.5	1.9
F	6.2	2.0	5.5	2.0
G	6.2	1.7	5.7	1.9
H	5.9	2.2	5.6	1.9
I	6.8	2.1	5.9	1.9
L	5.6	1.8	5.0	1.9
M	5.1	2.2	5.4	1.9
N	5.3	2.1	5.8	1.9
O	5.7	1.9	5.1	1.9
Q_1	4.5	1.9	5.5	1.9
Q_2	4.5	2.2	5.7	1.9
Q_3	6.5	1.9	6.0	1.8
Q_4	5.6	1.9	5.3	1.8

[a] $\underline{n}$ = 103

[b] $\underline{n}$ = 1280

Figure 1: Distribution of the Individual Scores of Three Students on the 16 PF



Personal Beliefs Inventory (PBI)

Among the human characteristics thought to be associated with effective teaching, the division personnel include the personal beliefs of the teacher. A review of related literature concerning these and other personal characteristics brought the works of Dr. Bob Burton Brown to the attention of the committee: his Experimental Scale (Brown, 1962) contains a Personal Beliefs Inventory (PBI), considered to be suitable for use in the current investigation.

The PBI consists of 40 general philosophical statements taken from the writings of John Dewey. While twenty of these statements express ideas compatible with Dewey's philosophy, the other twenty express ideas incompatible with his philosophy (the compatibility of each statement being determined by a panel of six qualified judges).

Although some studies using the PBI separate the 40 items into two randomly arranged forms of twenty items each, it was decided in the present study to use all 40 statements each time the instrument was administered. However, as recommended by Brown in order to avoid response set or the possibility that the order in which the items were presented would affect group mean scores, two forms, -- A and B, each containing all forty items -- were prepared, the only difference between the two forms being the order in which the items appeared.

The following three statements taken from the instrument illustrate those judged to be compatible with Dewey's philosophy: (a) "Nothing is or can be unchanging, absolutely certain"; (b) "Man's choices are good only if they prove successful in helping him live with some degree of security and

equilibrium in the world of nature"; and (c) "Knowledge is the sum total of what is known, as that is handed down by books and learned men." In contrast, the following three statements taken from the instrument illustrate those judged to be incompatible with Dewey's philosophy: (a) "Reaching a condition in which there were no problems would be the ideal life"; (b) "Man's destiny is determined by circumstances of nature which are beyond his control"; and (c) "Knowledge is truth to be accepted, held and treasured for its own sake."

Respondents to the instrument are asked to indicate on a six-point scale the extent of agreement each statement has with their own personal beliefs. A score of "1" represents a high measure of agreement and a score of "6" represents a high measure of disagreement. Little agreement is represented by "3," and little disagreement by "4." Scoring requires reversal of the ratings for the 20 items which are compatible with Dewey's philosophy (e.g., "1" becomes "6," "2" becomes "5," etc.). The total score is the summation of all ratings. The higher the total score, the greater the agreement between a person's beliefs and Dewey's philosophy. Thus, a maximum score of 240 would indicate complete agreement while a minimum score of 40 would indicate complete disagreement.

A total of 102 entering University of Georgia students responded to the instrument. The mean score was 131.4, with a standard deviation of 13.4. Scores ranged from 91 to 172. Table 6 compares the responses by these entering students with the responses of a group of 154 undergraduate and graduate education students at the University of Wisconsin, Madison (Brown, 1968). As the table indicates, the mean of the Georgia group is

well below the mean of the Wisconsin group. However, all of the students in the Wisconsin group were in professional education programs, and some even had teaching experience; while those in the Georgia group were just entering professional education programs. On the basis of such limited data further comment about scores seems unwarranted. It is anticipated that more meaningful comparisons will become possible as these entering students complete their preparatory programs and move into teaching positions.

Table 6

Results of Personal Beliefs Inventory Comparing Scores of Students Entering Division of Elementary Education at the University of Georgia with Scores of Education Students at the University of Wisconsin, Madison

Group	N	Mean	S.D.
University of Wisconsin Students	154	144.0	18.6
University of Georgia Students	102	131.4	13.4

Teacher Practices Inventory (TPI)

To determine the general nature of the educational beliefs of its entering students another part of the Experimental Scale (Brown, 1962), entitled the Teacher Practices Inventory (TPI), was used in the current investigation.

The TPI, consists of 40 statements about teaching practices suggested by the various categories which constitute a theoretical framework for describing John Dewey's educational philosophy. As with the PBI, all 40 items

were used each time the TPI was administered; two forms of the TPI were provided, each differing from the other only in the manner in which the items were distributed.

Illustrations reveal how the items contained in the TPI focus on educational practices rather than on general beliefs. Three items from the TPI which express Dewey's educational philosophy are: (a) "Teacher allows students to move freely about the room while engaged in purposeful activity"; (b) "Teacher has students compare the value of alternative courses of action and pass judgment on their relative desirability"; and (c) "Teacher urges students to put everyday things to use which have not occurred to others." Three items from the TPI which do not express Dewey's philosophy are: (a) "Teacher usually has all students working on the same page of the book at the same time"; (b) "Teacher asks the kind of questions that students should be able to answer if they have studied the lesson"; and (c) "Teacher tells students where to start and what to do to accomplish the task at hand."

As with the PBI, respondents to the TPI are asked to indicate on a six-point scale the extent of agreement each statement has with their own beliefs; scoring also is the same, high scores indicating a measure of agreement with Dewey and low scores indicating a measure of disagreement.

A total of 102 entering University of Georgia students completed the instrument. The mean score was 160.5, with a standard deviation of 21.4. Scores ranged from 115 to 229. Table 7 compares the responses obtained from this group of entering students with the responses made by a group of 154 education students at the University of Wisconsin, Madison (Brown, 1968). As indicated in the table, the mean of the Wisconsin group

exceeds the mean of the Georgia group by 16 points. Here again it is anticipated that more meaningful comparisons will become available at a later point in the longitudinal study.

Table 7

Results of Teacher Practices Inventory Comparing Scores of Students Entering Division of Elementary Education at the University of Georgia with Scores of Education Students at the University of Wisconsin, Madison

Group	N	Mean	S.D.
University of Wisconsin Students	154	176.7	20.4
University of Georgia Students	102	160.5	21.4

Dogmatism Scale (D Scale)

The previously mentioned PBI and TPI both were selected in an attempt to measure the content of the basic philosophical and educational beliefs of entering students. However, the investigating committee also thought it necessary to attempt to measure the structure of these beliefs. A review of previous investigations relative to teacher education led to the selection of the Dogmatism Scale (D Scale) for this purpose.

The D Scale, developed by Milton Rokeach purports to provide measures of the degree of flexibility characterizing a respondent's belief system. Studies using the D Scale indicate that it measures authoritarianism — that is, the rigidity of a respondent's beliefs concerning people and ideas — independent of a particular ideology. When D Scale scores have been listed

along with PBI and TPI scores, "... findings would indicate that the experimentalism inventories measure something that Rokeach's Dogmatism Scale does not, and vice versa" (Brown, 1968). Also, since the D Scale has been used extensively among college students, this would enable findings from the present investigation to be compared with those of similar studies in other institutions.

The D Scale contains 40 statements and is designed to be administered to groups as well as to individuals. Respondents are asked to indicate, on a six-point scale, how much they agree or disagree with each statement. The score earned by a respondent is the summation of his/her responses to all items; a higher score indicates a higher level of dogmatism, more closedness and greater rigidity -- and a lower score indicates a lower level of dogmatism, more openness, and greater flexibility -- in the structure of a respondent's belief system.

The mean score for the total of 102 entering University of Georgia students who responded to this instrument was 136.0, with a standard deviation of 18.2. Scores ranged from 183 on the "closed" side to 87 on the "open" side of the continuum. Table 8 compares the responses of this group with the responses of a group of 154 undergraduate and graduate education students at the University of Wisconsin, Madison (Brown, 1968). As indicated in the table, a difference of approximately six points exists between the mean scores for the two groups. It is anticipated that the use of the D Scale with this same group of entering students, over a period of years, will provide useful information when combined with other data.

Table 8

Results of D Scale Comparing Scores
of Students Entering Division of Elementary
Education at the University of Georgia with Scores
of Education Students at the University of Wisconsin, Madison

Group	N	Mean	S.D.
University of Wisconsin Students	154	130.4	27.0
University of Georgia Students	102	136.0	18.2

Value Survey

The members of the investigating committee recognize that the instruments used in the present study demonstrate a bias for data relative to the belief systems of the subjects. This bias is intentional and is based on the rationale that, since resources are limited, research time and energy should be expended where it is most likely to yield valuable information. All members of the research team, as well as most staff members of the sponsoring division, regard an individual's belief system as a very potent force in determining his/her behavior. Of the three dimensions of such a belief system being considered in the current investigation, two -- that is, content and structure -- have already been reported. Values constitute the third.

Relative to the importance of values in an individual's belief system, members of the investigating committee -- as well as many of the staff members of the sponsoring division -- agree with the position held

by Rokeach (1973):

> Values are determinants of virtually all kinds of behavior that could be called social behavior- of social actions, attitudes and ideology, evaluations, moral judgments and justifications of self and others, comparisons of self with others, presentations of self to others, and attempts to influence others. (p. 24)

Due to the reputation of Rokeach in this area of concern, special attention was given to his test entitled Value Survey; and it was this instrument which eventually was selected for use in the present study.

The Value Survey, Form D, is a projective test, simple in design and economical to administer either to groups or to individuals. It consists of two lists of 18 alphabetically arranged value referents -- referents selected for inclusion by Rokeach after years of research. One list contains terminal values which are related to life goals both social and personal in orientation (e.g., "salvation," "family security," and "a world at peace") while the other list contains instrumental values which are related to life styles involving competence and morality (e.g., "honest," "logical," and "clean").

Respondents are instructed to arrange the values in each list in order of importance to them personally as guiding principles. The procedure assumes an importance exists in the relative ordering of values rather than in the presence or absence of any particular value. It does not assume that the two lists contain those values which would be most important to every individual. Virtually all of the values in both lists would be considered socially desirable.

The instrument does not yield a conventional score. The rank-order procedure is ordinal, with each item capable of independence of meaning.

Median scores may be derived to describe group rankings. Methods for measuring significance are not readily available.

Median scores for the 18 terminal values of the Value Survey are shown in Table 9. Scores for students entering the division are compared with scores from one sample of only female subjects reported by the National Opinion Research Center and from another sample of both male and female subjects having some college education. The rank order of values for each group is given in parentheses.

Findings in Table 9 reveal certain similarities among the rankings of terminal values for all three groups. However, certain differences also should be noted. Shown below in rank order are the six most important terminal values as named by each of the three groups:

Rank	Female	Some College	Entering College
1	A World at Peace	Family Security	Salvation
2	Family Security	A World at Peace	Family Security
3	Freedom	Freedom	Self-Respect
4	Salvation	Wisdom	Inner Harmony
5	Happiness	Self-Respect	True Friendship
6	Self-Respect	A Sense of Accomplishment	Wisdom

"Family Security" and "Self-Respect" are among the most important values for all three groups. "Happiness," "Wisdom," and "Freedom," appearing in at least one or two of the above lists, have similar median scores reported for all three groups in Table 9. However, "Inner Harmony" and "True Friendship" -- considered among the most important values by the entering students -- appear to have median scores quite different from either group in the national sample. "Salvation," the most important value for entering University of Georgia students, also was ranked among the highest values for the female group in the national sample, but not for the group having some college

Table 9

Median Scores of Terminal Values on Rokeach Value Survey for Students Entering the Division Compared with Male and Female Subjects in a National Sample with Some College Experience and with Females in a National Sample*

Terminal Values	VALUE SURVEY MEDIAN SCORES		
	National Sample		Students Entering Division
	Female	Some College	
A COMFORTABLE LIFE	10.02 (13)	11.13 (13)	12.42 (13)
AN EXCITING LIFE	15.75 (18)	15.29 (18)	14.16 (15)
A SENSE OF ACCOMPLISHMENT	9.40 (10)	7.50 (6)	9.13 (10)
A WORLD AT PEACE	3.00 (1)	4.19 (2)	10.50 (11)
A WORLD OF BEAUTY	13.51 (15)	13.63 (15)	12.97 (14)
EQUALITY	8.29 (8)	8.50 (8)	10.61 (12)
FAMILY SECURITY	3.78 (2)	3.55 (1)	5.23 (2)
FREEDOM	6.05 (3)	5.38 (3)	7.63 (9)
HAPPINESS	7.34 (5)	7.90 (7)	6.50 (7)
INNER HARMONY	9.83 (12)	9.50 (9)	5.57 (4)
MATURE LOVE	12.32 (14)	12.20 (14)	7.30 (8)
NATIONAL SECURITY	9.81 (11)	10.20 (10)	15.00 (17)
PLEASURE	14.97 (16)	14.82 (16)	14.44 (16)
SALVATION	7.33 (4)	10.25 (11)	4.00 (1)
SELF RESPECT	7.40 (6)	6.88 (5)	5.44 (3)
SOCIAL RECOGNITION	15.01 (17)	15.09 (17)	15.17 (18)
TRUE FRIENDSHIP	9.06 (9)	10.50 (12)	6.23 (5)
WISDOM	7.71 (7)	6.04 (4)	6.23 (5)

Numbers in parentheses represent rank-order of values for each group.

education. "A World at Peace" is ranked among the highest values for both groups in the national sample, but not for the entering students.

Similarity among all three groups is characteristic of the six terminal values considered to be least important; these values are listed below in rank order as named by each of the three groups:

Rank	Female	Some College	Entering Students
18	An Exciting Life	An Exciting Life	Social Recognition
17	Social Recognition	Social Recognition	National Security
16	Pleasure	Pleasure	Pleasure
15	A World of Beauty	A World of Beauty	An Exciting Life
14	Mature Love	Mature Love	A World of Beauty
13	A Comfortable Life	A Comfortable Life	A Comfortable Life

Five of the six least important values are the same for all three groups, the only difference being that entering students include "National Security" among the least important values, while both groups in the national sample do not. On the other hand, "Mature Love" is ranked among the least important values by both groups in the national sample, but not by the entering students.

Median scores for the 18 instrumental values of the Value Survey are shown in Table 10. Scores for students entering the division are compared with scores for the same two groups -- that is, female subjects and both male and female subjects having some college education -- reported by the National Opinion Research Center. The rank ordering of values for each group is given in parentheses.

The six most important instrumental values as named by each of the three groups include more similarities than differences. These six values

Table 10

Median Scores of Instrumental Values on Rokeach Value Survey for Students Entering the Division Compared with Male and Female Subjects in a National Sample with Some College Experience and Females in a National Sample*

Instrumental Values	VALUE SURVLY MEDIAN SCORES		
	National Sample		Students Entering Division
	Female	Some College	
AMBITIOUS	7.33 (4)	7.79 (5)	9.61 (8)
BROADMINDED	7.64 (5)	7.42 (4)	8.10 (6)
CAPABLE	10.10 (12)	9.04 (7)	10.92 (12)
CHEERFUL	9.43 (10)	11.13 (14)	8.29 (7)
CLEAN	8.13 (8)	10.63 (13)	14.10 (16)
COURAGEOUS	8.06 (6)	6.71 (3)	10.50 (11)
FORGIVING	6.43 (2)	8.90 (6)	6.25 (4)
HELPFUL	8.07 (7)	9.57 (9)	6.67 (5)
HONEST	3.21 (1)	3.36 (1)	2.71 (1)
IMAGINATIVE	16.10 (18)	14.00 (17)	14.30 (17)
INDEPENDENT	10.72 (14)	10.21 (11)	11.88 (14)
INTELLECTUAL	13.22 (16)	10.29 (12)	13.30 (15)
LOGICAL	14.65 (17)	12.10 (16)	11.55 (13)
LOVING	8.64 (9)	9.68 (10)	2.89 (2)
OBEDIENT	13.08 (15)	14.73 (18)	15.00 (18)
POLITE	10.71 (13)	11.61 (15)	9.88 (10)
RESPONSIBLE	6.82 (3)	5.85 (2)	6.00 (3)
SELF-CONTROLLED	9.55 (11)	9.15 (8)	9.61 (8)

Numbers in parentheses represent rank-order of values of each group.

*Rokeach, M. The nature of human values. New York: The Free Press, 1973, pp. 364-391.

are, in rank order, as follows:

Rank	Female	Some College	Entering Students
1	Honest	Honest	Honest
2	Forgiving	Responsible	Loving
3	Responsible	Courageous	Responsible
4	Ambitious	Broadminded	Forgiving
5	Broadminded	Ambitious	Helpful
6	Courageous	Forgiving	Broadminded

"Honest," "Forgiving," "Responsible," and "Broadminded" appear as most important values for all three groups. "Loving" and "Helpful" are ranked among the most important values by the entering University of Georgia students not by the other two groups. Both groups in the national sample include "Ambitious" and "Courageous" among the top six values while the entering students do not.

Identification of the six least important instrumental values shows more similarities than differences among the three groups. These six values are, in rank order, as follows:

Rank	Female	Some College	Entering Students
18	Imaginative	Obedient	Obedient
17	Logical	Imaginative	Imaginative
16	Intellectual	Logical	Clean
15	Obedient	Polite	Intellectual
14	Independent	Cheerful	Independent
13	Polite	Clean	Logical

With two exceptions, "Clean" and "cheerful," the least important instrumental values either are common to all three groups or are reported with median scores that border the least important. While "Clean" is ranked among the six least important values for the students entering the division and for the group in the national sample having some college education, the ranking and the median score for this value are very different for the female group. On the other hand, "Cheerful" is reported with a higher median score and ranking for the entering students and the female group in the national sample than for the

group having some college education.

The interpretation of these data is difficult. Rokeach has suggested that values are cognitive representations of needs. Thus, it would follow that variations of value rankings should be related to variations in needs. "A World at Peace" was ranked as one of the highest values for both groups in the national sample in 1968, a time when the United States was involved in a war in Vietnam. However, for the students entering the division during 1974-75, a time when the United States was not involved in any war, "A World at Peace" was not included among the highest values. The investigating committee felt that a cluster analysis of data obtained from the Value Survey might become important in describing values which would be associated with effective teaching, in identifying needs of prospective teachers from a value perspective, and in planning a teacher education program to meet those needs.

The University of Georgia Semantic-Differential Inventory (Form EEL 1975)

The members of the committee agree that they should investigate the meanings entering students ascribe to certain concepts associated with teaching as a profession. It is assumed that a future teacher's behavior may be determined in part by the significance or conceptual meaning he/she places in particular persons, places, or things in the educational environment. The semantic-differential techniques (Osgood et al., 1975) was selected as the means by which to obtain these data.

A review of the literature relating to the use of the semantic-differential technique failed to reveal any generally used tests appropriate for this study. There appeared to be no prior use of the particular concept words or statements which the investigators have selected. The University of Georgia Semantic-Differential Inventory (Form EEL 1975) was created to meet the needs

of this investigation and was based on the principles established by the authors.

The semantic-differential techniques utilizes adjective pairs selected from an empirically tested list which provides extreme points for responses as to how one "feels" when he/she is confronted with a particular concept word or phrase. After the subject reads the word or phrase he/she responds to it on a seven point scale to indicate which point best represents the meaning that concept holds for him/her. Figure 2 presents a sample page from inventory showing the twelve sets of adjectives and the concept "Learning." The remainder of the concepts are listed as column headings in Figure 3 where the findings are summarized.

The concepts were chosen to represent education both as a process (e.g., "Teaching," "Teacher Education at the University of Georgia," and "Pupil Discipline in School") and as a profession (e.g., "School Teachers," "Principal's Role in the Schools," and "Schools for Children in the United States"). Some concepts were selected to describe the attitudes held by students about education as a human enterprise (e.g., "Children" and "Myself"). The ten concepts were expressed in commonly used words to avoid the problems introduced by more technical language (e.g., "Curriculum," "Objectives," and "Teaching Competencies").

Meanings were investigated on the three dimensions recommended by the authors: potency, evaluation, and activity. A high potency rating to a concept usually means that it is perceived as strong and/or powerful; a high evaluation rating usually means it is valued as good, right or beautiful; and a high activity rating usually means that it is perceived as having or requiring a great deal of movement and/or energy.

Figure 2

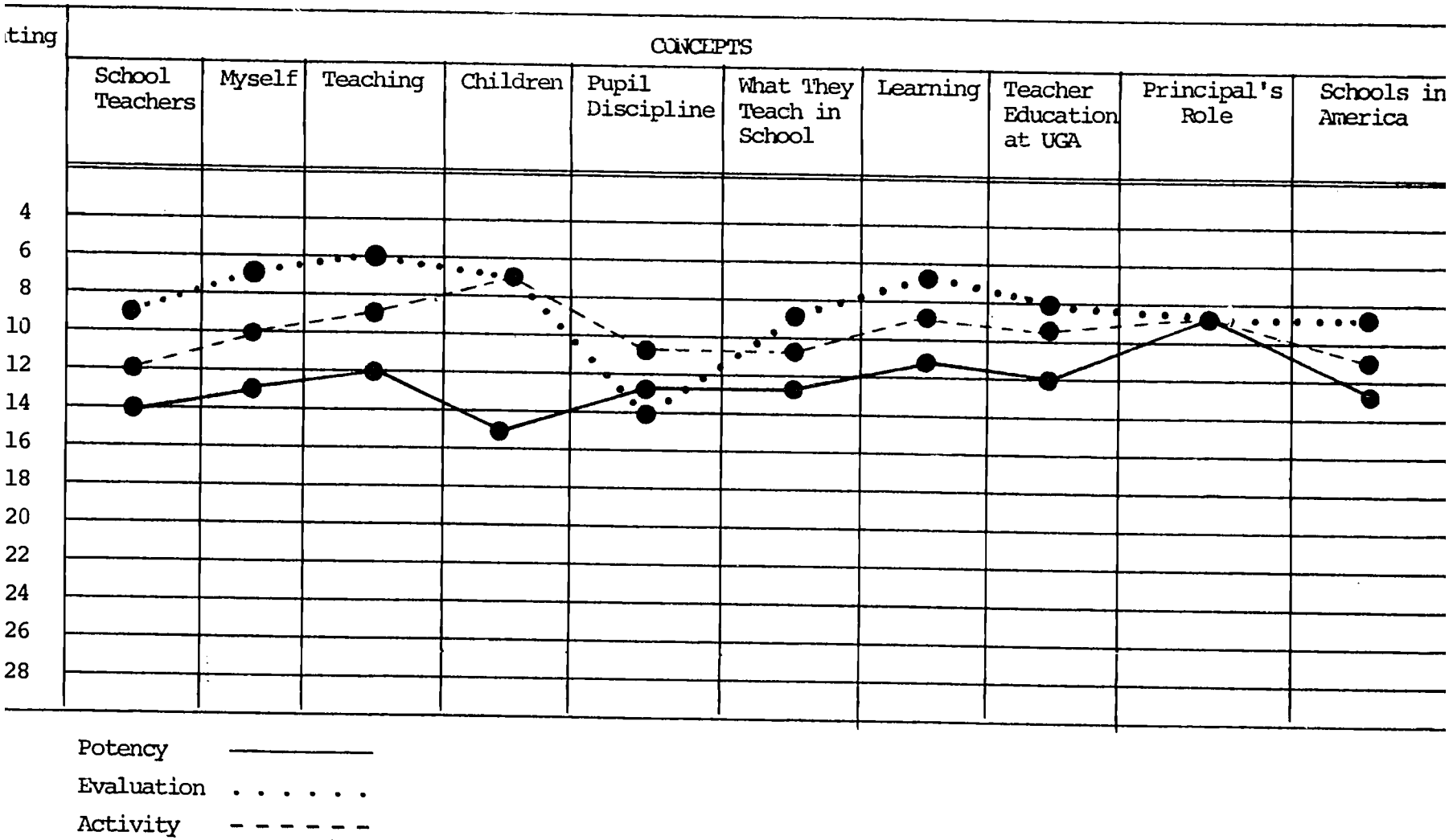
A Sample Page from the University of Georgia
Semantic-Differential Inventory (Form EEL 1975)

Learning

LARGE	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	SMALL
UNPLEASANT	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	PLEASANT
FAST	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	SLOW
DULL	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	SHARP
THIN	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	THICK
HAPPY	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	SAD
WEAK	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	STRONG
GOOD	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	BAD
MOVING	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	STILL
UNFAIR	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	FAIR
PASSIVE	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	ACTIVE
HEAVY	____: 1	____: 2	____: 3	____: 4	____: 5	____: 6	____: 7	LIGHT

Figure 3

Profile of Students Entering the Division in Terms of Mean Scores Obtained by Semantic Differential Dimensions of Potency, Evaluation, and Activity on Ten Selected Concepts in Education



The semantic-differential in this investigation is a forced choice, three factor, 120 item test (10 concepts times 12 scales) employing the Form II graphic scale method. One sheet of paper is used for each concept, with all judgments elicited successively as shown in Figure 2. Scales representing the same factor are alternated in polarity direction (e.g., unfair - fair but good - bad) to prevent the formation of position preferences. Further, the order of the factors is rotated.

Figure 3 summarized the mean scores of the entering students. It shows that students entering the Division generally ranked the concepts higher in the evaluation and activity dimensions than in the potency dimension. This could be interpreted to indicate that students perceived educational concepts as relating more to goodness and energy than to influence or authority. This did not hold for "Pupil Discipline in the Schools" or for "Principal's Role in the Schools." Figure 3 also shows that students valued "Myself," "Teaching," "Children," and "Learning" more than the other concepts.

Summary

This paper has presented descriptive information about undergraduate students being admitted to the division's programs in teacher preparation at the early childhood, elementary, and middle school levels. The investigators feel these personal data do not have any predictive power at the time this report was written. They may have some value for other colleges who have comparative data. The real value for this investigation will be in follow-up studies which have been planned in the research design.

Entry data has been obtained from students who entered the program during 1975-76. This data will be presented in a third report by the committee.

Additional studies which are in progress include: collecting and reporting data from undergraduate students as they complete the division's programs in teacher preparation; descriptions of each of the programs; and follow-up of graduates after they enter the teaching profession. These studies will be presented in subsequent reports.

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