DOCUMENT RESUME

ED 029 820 SP 002 598

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A Correlation Study of the Minnesota Teacher Attitude Inventory and Kerlinger's ES-VII.

Note-11p.

EDRS Price MF-$0.25 HC-$0.65

Descriptors-*Attitude Tests, Educational Philosophy, Occupational Tests, *Teacher Attitudes, Teaching, Test Interpretation, Test Reliability

Identifiers-*Kerlingers ES-VII, Minnesota Teacher Attitude Inventory, MTAI

The Minnesota Teacher Attitude Inventory (MTAI) and Kerlinger's ES-VII are instruments which examine both the individual's general educational philosophy and his ideas of practice. A study was designed to investigate (1) the common variance in the Difference score of the 150-item MTAI and the D score of Kerlinger's 30-item ES-VII with respect to the variables of sex and college classification and (2) relationships between subgroups on the Difference score of the MTAI and the D score of the Kerlinger's ES-VII. Both tests were administered to a modified random sample--103 prospective teachers enrolled in the introductory education course in a large state university. Product moment correlations were computed between the Difference score of the MTAI and the D score of Kerlinger's ES-VII for the total and the six subgroups: t tests were computed to test for significant relationships between subgroups on both scales. Students ranking at the high end of the MTAI scale tended to score significantly progressive on Kerlinger's scale while those scoring low on the MTAI tended significantly to hold a traditional philosophy. Only one t ratio was significant: boys and girls differed significantly at the .01 level on the Difference score of the MTAI. The study supports the suggestion that the 30-item likert type scale (Kerlinger's) may yield more consistent results than the more widely employed 150-item true-false MTAI. (JS)

A Correlation Study of the Minnesota Teacher Attitude Inventory and Kerlinger's ES-VII

The role of the teacher in our educational system is a crucial one. Brembeck (1966) forecast that the teacher of tomorrow will teach in different kinds of schools with new kinds of skills and techniques. School construction, curricular offering, teaching procedures, and research and experimental emphases will change; however, the impact of the teacher's attitude upon the learning process will remain an important phenomena.

Even though most colleges and universities offer courses in Philosophy of Education and hundreds of books and articles have been written, there have been few attempts to measure objectively the teacher's educational philosophy and to relate these philosophical attitudes to their effectiveness or ineffectiveness.

Ryan (1960) has contributed a momentous report of his ten-year study in which he attempts to define the teacher's classroom behavior in relationship to teacher characteristics reported on a self-report inventory. Jensen (1960) and Getzels and Thelen (1960) used a socio-psychological model to analyze the influence of the teacher's behavior on the learning process. Brown (1968) developed the Experimentalism ("X") to ascertain compatibility or incompatability with Dewey's educational philosophy of experimentalism (1916; 1929). The X Scale is comprised of three parts: (a) the Personal Beliefs Inventory, (b) the Teacher Practices Inventory, and (c) the Teacher Practices Observation Record. The Personal Beliefs Inventory has a design very similar to the Dogmatism scale (Rokeach, 1960) and Ethnocentrism Scale (Adorno, Frenkel-Brunswick, Levinson, and Sanford, 1950). Two educational scales, The Minnesota Teacher Attitude Inventory (MTAI) and Kerlinger's ES-VII are instruments which examine both the individual's general educational philosophy and his ideas of practice.

Research on the Minnesota Teacher Attitude Inventory (MTAI) was begun in the late forties (Cook and Leeds, 1947; Leeds and Cook, 1947). The instrument is still used widely, even though many inconsistencies have been found in the reported research. Buros (1967) lists 152 studies involving the MTAI. The 150-item instrument yields only one score. Cook, Leeds, and Callis (n.d.) suggest that high scores on MTAI are characteristic of teachers capable of establishing harmonious relationships with students. They postulate that this type of teacher is secure in himself and is able to work in a permissive atmosphere wherein both teacher and student can think, act, and speak one's mind. Low scoring teachers are more likely to dominate the classroom, demand an orderly classroom and be more concerned with subject matter to be covered than with the needs and feelings of the students.

A more recent inventory, Kerlinger's ES-VII, has been developed over a ten-year period by Kerlinger (1956; 1958a; 1958b; 1959; 1960; 1963) and Kerlinger and Kaya (1959a; 1959b). Kerlinger has identifies two factors of educational attitudes: (a) Factor A, Progressive Philosophy and (b) Factor B, Traditional Philosophy. Person scoring high on Factor A would have a high regard for pupil as a person and use of democratic procedures in classroom. They would be characterized by warmth, sensitiveness, and cooperativeness. A high score on Factor B would be reflective of value on content, control and direction by teacher, and emphasis on cultural heritage. A D score or Difference score is a directional measure, a tendency toward acceptance of a progressive or traditional philosophy of education.

The basic purpose of this study is twofold:

(1) to investigate the common variance in the Difference score of the 150-item MTAI and the D score of Kerlinger's 30-item ES-VII with respect to the variables of sex and college classification;

(2) to investigate relationships between subgroups on the Difference score of the MTAI and the D score of Kerlinger's ES-VII.

Subjects

The subject(s) were 103 prospective teachers enrolled in the initial education course in a large state university. Both tests were administered to four sections of students within the same week. The Ss may be considered a modified random sample in that they matriculated in the sections taught by the investigator (four of 36 sections of Introduction to Professional Development). The University required the prospective teachers to enroll in this course during the initial quarter of their enrollment in the College of Education. Table 1 shows tally of Ss by sex and college classification.

Procedure

Product moment correlations were computed between the Difference score of MTAI and the D score of Kerlinger's ES-VII for the Total, Male, Female, Freshmen, Sophomore, Junior and Senior subgroups. T tests were computed to test for significant relationships between subgroups on Difference score of MTAI and between subgroups on D score of Kerlinger's ES-VII. Table 2 is a tabulation of the product moment correlations. Table 3 presents the results of t tests between subgroups.

Results

In the computation of validity coefficients (concurrent) between the Difference Score of the MTAI and the D Socre of Kerlinger's ES-VII correlations significa at the .01 level were computed for the Total Group (.55), Girls (.54), Boys (.63), Freshmen (.62), Sophomores (.75), and Juniors (.60). The correlation coefficient for the small group of Seniors (-.22) was not significant. The statistical computation revealed that students ranking at the high end of the MTAI scale tended to score significantly progressive on Kerlinger's scale. Congruently, students scoring low on the MTAI tended significantly to hold a traditional philosophy. An inversed relationship existed between the MTAI and Kerlinger's EX-VII for the smal

Table 1

Subjects by Sex and College Classification

Variable	Number
Male	20
Female	83
Total	103
Freshmen	39
Sophomore	19
Junior	35
Senior	10
Total	103

Table 2

Means, S. D. and Correlations of Difference Score, MTAI and D score, Kerlinger's ES-VII

Subgroup	MTAI Mean	MTAI S.D.	ES-VII Mean	ES-VII S.D.	r	Level of Significance
Total	20.93	29.66	11.05	11.35	.55	.01
Girl	24.11	30.46	11.69	11.00	.54	.01
Boy	7.75	21.58	8.40	12.35	.63	.01
Freshmen	15.18	28.88	10.26	11.28	.62	.01
Sophomore	21.68	28.29	10.42	12.95	.75	.01
Junior	25.37	30.01	12.03	11.37	.60	.01
Senior	26.40	29.93	9.90	9.77	-.22	NS

Table 3

t Ratios Between Subgroups on
Difference Score of MTAI and Subgroups on
Kerlinger's ES-VII

Variable	Subgroups	df	t ratio	Level of Significance
Difference MTAI	Girls-Boys	101	2.30	.01
	Freshmen-Sophomores	56	.81	NS
	Freshmen-Junior	72	1.48	NS
	Freshmen-Senior	47	1.08	NS
	Sophomore-Junior	52	.43	NS
	Sophomore-Senior	27	.41	NS
	Junior-Senior	43	.09	NS
D Score				
ES-VII	Girls-Boys	101	.48	NS
	Freshmen-Sophomore	56	.04	NS
	Freshmen-Junior	72	.63	NS
	Freshmen-Senior	47	.09	NS
	Sophomore-Junior	52	.47	NS
	Sophomore-Senior	27	.11	NS
	Junior-Senior	43	.52	NS

group of Seniors.

The coefficient of determination indicates the proportion of the variance in the D Score of Kerlinger's ES-VII which measures the same attribute in the criterion (MTAI Score), i.e., the congruency of Kerlinger's progressive philosophy with the measured attitudes of the MTAI alleged to be associated with successful teaching. The proportions of common variance for the subgroups of this study are reported in Table 4.

All subgroups in the study scored at the upper end of the MTAI scale (positive scores). These subgroups also tended to hold a progressive philosophy of education as measured by Kerlinger's instrument. Kerlinger suggested that scores between -30 and +30 represent a neutral position. Scores above plus or minus 30 indicate a definite inclination toward the respective philosophy. Only the Total Group, Girls, Juniors, and Seniors scored +30 or above; however, the other subgroups scored in a progressive direction. Calculation of t ratios between the subgroups on the Difference Score of the MTAI and the D Score of Kerlinger's ES-VII produced only one significant t ratio. Boys and Girls differed significantly at the .01 level on the Difference Score of the MTAI. Girls differed significantly from Boys in their tendency to hold attitudes associated with success in the classroom.

Discussion

Educators need not be reminded that in using achievement, intelligence, and personality instruments the least dependable are personality measures. The two tests investigated in this study are included in this category. In spite of highly established validity and reliability caution should be invoked when there is a temptation to use the MTAI, Kerlinger's ES-VII, and related instruments to make "earthshaking" decisions. However, serious attention and study should be given to the nature and effect of teacher attitudes and philosophy on the learning

Table 4

Percentages of Overlap of the MTAI Difference Score With D Score of Kerlinger's ES-VII

Group	Validity Coefficient	Coefficient of Determination
Total Group	.55*	.30
Boys	.63*	.40
Girls	.54*	.29
Freshmen	.62*	.38
Sophomores	.75*	.56
Juniors	.60*	.36
Seniors	-.22	.05

*Significant .01 level

process. This study lends some credence to the suggestion that in investigating the teacher or educator's attitudes and philosophy perhaps the investigator may wish to consider the 30-item likert type scale (Kerlinger's ES-VII) rather than the 150-item true-false MTAI. The results of the study reveal significant correlations between the Difference Score of the MTAI and the D Score of Kerlinger's ES-VII (Difference score). Thus when interpreted in terms of commonness of measurement the percentages of overlapping variances ranged from 56% for the subgroup of Sophomores to 29% for the subgroup of Girls. The small Senior subgroup did not have a significant correlation.

The only significant t test was between the subgroup of Boys and the subgroup of Boys on the Difference Score of the MTAI. The small N of males could account for the single difference. Further investigation with a larger N might yield different results for all comparisons.

Kerlinger's instrument has not been employed as widely in research as the MTA It seems plasuible to conclude that future employment of the instrument in action and applied research may prove to give more consistent results than has the MTAI.

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