



When using this chart, the resolution should be at least 1.0.

DOCUMENT RESUME

ED 168 979

SP 013 708

AUTHOR Miller, A. H.; Thompson, B.  
TITLE Dimensions of Educational Worldview.  
PUB DATE 79  
NOTE 10p.; Paper presented at the annual meeting of the Southwest Educational Research Association (April 1979)

EDRS PRICE MF01/PC01 Plus Postage.  
DESCRIPTORS \*Attitude Tests; \*Conventional Instruction; \*Educational Attitudes; \*Educational Philosophy; Educational Theories; Factor Analysis; \*Progressive Education; Statistical Studies; Teacher Attitudes; \*Teachers

ABSTRACT

The study was conducted to gain insight into the nature and structure of educators' education-related attitudes and beliefs. Subjects included both education students and teachers. The subjects completed two instruments (Kerlinger's Educational Scale VII and the Educational Philosophy Index). Results suggest that more than two dimensions are required to subsume educators' beliefs, although some researchers have argued that two dimensions should be sufficient. Thus, it appears that educators' beliefs are more complex than some educators generally assume. (Author/DS)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

ED168979

FEB 2 10 54 AM '79

Dimensions of Educational Worldview

A.H. Miller

University of Houston

B. Thompson

Houston Independent School District

1. Educational attitudes
2. Educational philosophy
3. Teacher attitudes

Paper presented at the annual meeting of the Southwest Educational Research Association, 1979.

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

A. H. Miller

## ABSTRACT

The study was conducted to gain insight into the nature and structure of educators' education-related attitudes and beliefs. Subjects included both education students and teachers. The subjects completed two instruments. Results suggest that more than two dimensions are required to subsume educators' beliefs, although some researchers have argued that two dimensions should be sufficient. Thus, it appears that educators' beliefs are more complex than some educators generally assume.

Bruce Joyce and Marsha Weil (1972) have argued that "educational procedures are generated from general views about human nature and about the kinds of goals and environments that enhance human beings." Unfortunately, it would be difficult to test this notion. Kerlinger's (1967) statement that "few attempts have been made to determine empirically the nature and structure" of educational worldviews holds true even today. The main exception to this generalization is provided by Kerlinger's own work.

For two decades Kerlinger (1958) and Kerlinger and Kaya (1959) have argued that two basic dimensions, relatively uncorrelated to each other, underlie beliefs about education. It has been argued that these two dimensions are similar to two of the fundamental views of education that philosopher John Dewey outlined at the turn of the century, i.e.—"Progressivism" and "Traditionalism."

The study reported here was undertaken to provide further insight into the structure of educators' perceptions of environment; once such insight is achieved, it should be possible to determine how these dimensions impinge on the decisioning processes of teachers. Specifically, the study

primarily addressed the question, do Kerlinger's two dimensions subsume all the dimensions of educators' worldviews?

#### Method

The subjects (n=195) in the study were education students or teachers. Both subject groups were included in the study in order to maximize systematic variance in responses and thus hopefully increase the likelihood of result replicability. Each subject completed Kerlinger's (1967) Education Scale VII and the Educational Philosophy Index (Thompson and Miller, 1977). The Educational Philosophy Index was developed to measure the extent to which persons agree or disagree with what Kneller (1974) has termed educational theories, i.e.—formal philosophies mediated by experience.

Data from each instrument were subjected to separate factor analyses. Two factors, judged to measure "Progressivism" and "Traditionalism," were extracted from the interitem correlation matrix computed from Education Scale VII response data. Five second-order factors, judged to measure "Essentialism," "Humanism," "Perennialism," "Progressivism," and "Existentialism," were extracted from the correlation matrix associated with the Educational Philosophy Index.

Least square regression estimates of factor scores were calculated for both data sets.

These factor scores were then employed in a canonical correlation analysis conducted to examine relationships between the factors from the two instruments. Two statistically significant ( $p < .05$ ) pairs of canonical variates were identified. The canonical correlation between the two sets of factors on the first pair of variates was .45. The canonical correlation between the two sets of factors on the second pair of variates was .31.

Canonical structure and index coefficients (Thompson and Frankiewicz, in press) were computed in order to achieve some understanding of the dynamics of these relationships. A structure coefficient when squared indicates the percentage of variance which a variable linearly shared with an aggregate of the variables of its *own* set. An index coefficient when squared indicates the percentage of variance which a variable linearly shared with an aggregate of all the variables of the *other* set. Canonical variate, structure, and index coefficients for the variates are presented in Table 1.

Table 1  
Canonical Coefficients

Factor	V	S	I	V	S	I
Progressivism	-.62	-.62	-.28	.78	.78	.24
Traditionalism	.78	.78	-.35	.62	.62	.19
Essentialism	.87	.17	.08	-.22	-.25	-.08
Humanism	-.92	-.62	-.28	.56	.24	.08
Perennialism	.42	.33	.15	.77	.72	.22
Progressivism	.14	.19	.08	-.23	-.14	-.04
Existentialism	.32	.38	.1	.46	.79	.15

Note: "V"=variate coefficient; "S"=structure coefficient; "I"=index coefficient



### Conclusions

Examination of the canonical variate, structure, and index coefficients suggests several conclusions. With regard to the first of the two pairs of canonical variates, the variate spanning the philosophy factors was primarily defined by the factor, "Humanism," which was inversely related to the variate, as indicated by the factor's structure coefficient. The variate spanning the Education Scale factors was defined by both the factors, "Progressivism" and "Traditionalism." "Traditionalism" was directly related to the variate; "Progressivism" was inversely related to the variate. These results suggest that educators who agree with the tenets of "Humanism" tend also to be progressive and non-traditional in outlook.

With regard to the second pair of variates, the variate spanning the philosophy factors was primarily defined by the factor, "Perennialism," as indicated by the factor's structure coefficient. The factor was directly related to the variate. The variate spanning the Education Scale factors was defined by both the factors, "Progressivism" and "Traditionalism." The two factors were both directly related to the variate.

Overall, the results appear to support the construct

validity of the Educational Philosophy Index, i.e.—only theoretically relevant philosophy factors were associated with the "educational attitudes" factors of the Education Scale VII. It is, of course, surprising that the philosophy factor, "Progressivism," was not substantially associated with the "educational attitude" factor, "Progressivism." However, this finding was made more understandable when the items measuring the constructs were examined. The Education Scale VII contains no items which measure extent of agreement with a core concept of progressive outlook, i.e.—that change is the essence of contemporary reality. Perhaps the authors of Education Scale VII did not intend to fully measure all aspects of the worldview articulated by Dewey.

Of more theoretical interest, however, is the conclusion that not all the educational philosophies were associated with the "educational attitudes" factors. Interpretation of the canonical index coefficients indicates that, on each of the two identified pairs of canonical variates, only one philosophy factor shared more than 5% of its variance with each aggregate of the two Education Scales factors. This enhances the possibility that not

all worldviews are subsumed under two categories. The findings also suggest that the worldviews of educators may be more structurally complex than some educators and researchers generally assume.

#### References

- Kerlinger, Fred N. The first- and second-order factor structures of attitudes toward education. American Educational Research Journal, 1967, 4, 191-205.
- Kerlinger, Fred N. Progressivism and Traditionalism: Basic Factors of educational attitudes. Journal of Social Psychology, 1958, 48, 111-135.
- Kerlinger, Fred N., and Kaya, Esin. The construction and factor analytic validation of scales to measure attitudes toward education. Educational and Psychological Measurement, 1959, 19, 13-29.
- Kneller, G.F. Introduction to the philosophy of education (2nd ed.). New York: Wiley and Sons, 1964.
- Joyce, Bruce, and Weil, Marsha. Models of teaching. Englewood Cliffs: Prentice Hall, 1972.
- Thompson, B., and Frankiewicz, R.G. CANON: A computer program which produces canonical structure and index coefficients. Educational and Psychological Measurement, in press.
- Thompson, B., and Miller, A.H. Educational Philosophy Index. Unpublished test, 1977.