Development of an instrument for assessing educational value orientations

By: Catherine D. Ennis and Linda M. Hooper

Ennis, C.D., & Hooper, L.M. (1988). Development of an instrument for assessing educational value orientations. *Journal of Curriculum Studies, 20(3),* 277-280.

Article:

The concept of values as persistent universal beliefs has been developed extensively in the disciplines of philosophy, sociology, anthropology and psychology.[1] According to Kerlinger, the interest in the understanding and measurement of beliefs is predicated on the assumption that value differences constitute the essence of major human choices and conflicts.[2] In curriculum, the question, 'What knowledge is of most worth?',[3] is critical to the selection of curriculum content, The rationale for content selection is embedded in the belief systems of individuals involved in the curriculum development process. These belief systems, frequently termed 'educational value orientations', have been described in the curriculum literature,[4] While there is logical and anecdotal evidence to support value orientations, empirical efforts to document specific teacher beliefs have been limited to categorizations within major philosophical schools of thought.[5]

The practical significance of educational value orientations lies in their potential predictive role in curriculum and staff development. In educational settings where teachers have a primary responsibility for curriculum development, differences in programme focus may be directly related to these belief systems. The potential impact of staff in-service training or curriculum innovation may be influenced by the compatibility of the teacher's values with those espoused by the workshop leaders. Therefore appropriate instrumentation is required to study the theoretical foundations of value orientations. The purpose of this study was the development of a reliable and valid inventory to examine critical features of five educational value orientations. The research is based on the assumption that there is a range of acceptable educational values which influence curriculum decisions in the United States. Efforts to examine these beliefs should be conceptualized broadly to represent a spectrum of value perspectives. In. this study, value orientation items were written as examples of physical education content for use with teachers in this curriculum area. For example, one way that the emphasis on disciplinary mastery can be reflected in physical education is through proficiency in performing movement skills. The following is an example of an item reflecting that emphasis from the teacher's perspective: ‘I teach my students to adjust their body positions to catch balls thrown at different levels and speeds.’

Theoretical foundation

Curriculum decision-making in school settings in the United States has been linked with educational values typically classified into five orientations: disciplinary mastery, learning process, social reconstruction, self-actualization and ecological validity. Advocates of the disciplinary mastery orientation value the transmission of knowledge and skills to the extent that the students can demonstrate proficiency. Scientific principles consistently structured to represent the knowledge base constitute the central focus of the curriculum.[6] The learning process orientation places the educational emphasis on what is learned by students. Tasks are separated into components and then reassembled into appropriate sequences to facilitate the learning process.[7] The social reconstruction orientation places the curricular emphasis on societal reform. Advocates believe that curriculum should challenge students to analyse critical questions and develop novel strategies to reform society.[8] In the self-actualization orientation the teacher seeks to foster the personal growth of the individual. Students are encouraged to become autonomous learners and to challenge themselves to reach their potential.[9] Advocates of the ecological validity orientation place the curricular emphasis on the holistic nature of the student living in

harmony with the environment. Students are nurtured to become responsible decision-makers who select curriculum experiences based on personal meaning.[10]

Instrument construction

For the purpose of instrument construction, each of the value orientations was conceptualized as a distinct construct or dimension, A content analysis was conducted to determine the primary components of each orientation. Domain specifications, defined as elaborate descriptions of theoretical components,[11] were formulated from the content analysis for use in item construction. Based on the domain specifications, a domain definition was written for each value orientation and sent to ten curriculum specialists for review prior to item development. Eight specialists responded, with minor wording suggestions. The definitions were revised for clarity based on these critiques. For example, the definition of self-actualization included the sub-categories of autonomy, personal challenge, student-centred, and self-direction derived from content analysis:

> Self-actualization: Students are guided and challenged to become autonomous and self-directed and to search for ways to gain new insights into their unique characteristics and abilities.

Once the domain definitions were judged acceptable, items were written to reflect each subcategory defined in the content analysis. Five items were written to represent each of the 18 subcategories, resulting in a 90-item inventory. Items were ordered randomly within each dimension. A five-point Likert scale (5 = strongly represents to 1 = poorly represents) was used to assess the representativeness of the item.

Validation

We asked 50 curriculum scholars from universities in the United States to participate in the validation of the instrument, of whom 45 agreed to complete the inventory. Of the inventories 42 or 91% were returned. Validity was examined through an analysis of the experts' mean ratings for each item. As the items were written directly from domain specifications, a conservative standard of 3·75 was used as the decision rule. Item-means achieving this standard were considered valid and representative of the domain definition. Estimates of reliability for the items were examined through internal consistency coefficients calculated using Cronbach's Alpha, 0.70 being used as the decision rule for internal consistency of item categories, following Nunnally.[12]

Table 1. Category means and internal consistency for value dimensions.

	n	Mean		Alpha	
Category	90-item inventory	90-item[a] inventory	70-item[b] inventory	90-item inventory	70-item inventory
Disciplinary mastery	20	3·47	3·78	0·92	0·91
Social reconstruction	15	4·06	4·08	0·85	0·84
Learning process	15	3·83	3·86	0·82	0·79
Self-actualization	20	3·90	4·04	0·86	0·77
Ecological validity	20	3·90	3·96	0·94	0·91

[a] Five-point Likert Scale (5 = strongly represents).
[b] Each category in the 70-item instrument contained 14 items.

Results and discussion

Mean scores for value orientation categories reported in Table 1 ranged from 4·06 for social reconstruction to 3.47 for disciplinary mastery. This latter category was the only one not meeting the 3.75 standard. Of the 90-item means 58 or 64% met the 3.75 decision rule. Alpha coefficicients for the 90-item inventory ranged from 0·92 for disciplinary mastery to 0·82 for learning process (see Table 1). Therefore all of the categories met the 0.70 decision rule for internal consistency. These data indicated that the items were compatible and, with the exception of the disciplinary mastery category, consistently represented the value dimensions. (Sub-category data are available from the authors.)

The ultimate goal of instrument development was to provide a valid inventory to assess teachers' value orientations. Since time is a critical factor for teachers, the use of a 90-item instrument is unrealistic. Therefore an effort was made to reduce the number of items and still maintain acceptable coefficients in each category. Item deletion can be a delicate process as the alpha coefficient is sensitive to the number of items. Small reductions in items can lead to substantial decreases in the alpha coefficient. To shorten the inventory, items were eliminated within subcategories based on lowest mean scores. The mean values for the categories of the 70-item inventory are reported in the third column of Table 1. Additional research is planned to reduce the number of items still further using item-linking procedures such as those used in item-response theory.

Further consideration was given to the format, since it was important for this to reflect the context in which curricular decisions are typically made. Decision-makers are frequently required to choose between attractive alternatives. As curriculum selection involves a series of difficult choices, inventories that allow decision-makers to rate all items as positive and of equal value, as on Likert formats, do not reflect the central problem in curriculum development: that of selecting knowledge of *most worth.* In addition, because each of the five value orientations was considered attractive, examination of these positions using a Likert format may not discriminate among the orientations. In order to reflect the curriculum decision-making process better, a ranking format was selected for the instrument. Items which received the highest means and alpha coefficients were re-arranged in five-item sets. Each item in the set represented one of the five value dimensions. 'The final inventory consisted of 14 five-item sets. In research currently in progress, teachers are being asked to rank the importance of the items within each set. Data will be analysed based on a composite score for each category. For example, teachers may have ranked items in the social reconstruction value orientation category consistently higher than those in the disciplinary mastery category. The data can be used in this way to describe teachers' value preferences. The instrument can also be used with others which assess content decisions. The effort here is not to change or control these decisions, but to examine relationships that exist in order to better understand and facilitate curriculum decision-making.

References

1. In philosophy, see LOVEJOY, A. D, (1950) Terminal and adjectival values. *Journal of Philosophy,* 47: 583-608. In Sociology, see WILLIAMS, R, M. Jr (1978) Change and stability in values and values systems: a sociological perspective. In Rokeach, M. (ed.) *Understanding Human Values* (New York: Free Press). In anthropology, see
KLUCKHOHN, F. P., and STRODTBECK, F. L. (1961) *Variations in Value Orientations* (Evanston, IL: Row Peterson). In psychology, see FEATHER, N. T. (1975) *Values in Education and Society* (New York: Free Press).
2. KEHLINCER, F. N. (1972) The study and measurement of values and attitudes. Paper presented at the annual meeting of the American Educational Research Association, ERIC ED 079 618, p. 1,
3. See, for example, SPENCER, H. (1860) *Education: Intellectual, Moral and Physical* (New York: Appleton); BELLACK, A, A. (1965) What knowledge is of most worth? *The High School Journal,* 48: 318-332; and BRODDY, H. S. (1982) What knowledge is of most worth? *Educational Leadership,* 39: 574-578.
4. See, for example, EISNER, E. W. and VALLANCE, E. (1974) *Conflicting Conceptions of Curriculum* (Berkeley, CA: MCCUTCHEN); HUENECKE, D. (1982) What is curriculum theorizing? What are its implications for practice? *Educational Leadership,* 39: 290- 294; McNan., J. D. (1985) Curriculum: *A Comprehensive Introduction* (Boston, MA: Little Brown): 1-82; and OHLOSKY, D. E. and Swim, B. O. (1978) Curriculum *Development: Issues and Insights* (Chicago, rt..: Rand McNally).
5. O'NeiL, W. F. (1981) *Educational Ideologies : Contemporary Expressions of Educational Philosophy* (Santa Monica, CA: Goodyear).
6. For a detailed explanation of this theoretical position, see BRUNER, J. S. (1960) *The Process of Education* (Cambridge, MA: Harvard University Press); and HIRST, P. H. (1974) *Know-ledge and the* Curriculum (London: Routledge *8c* Kegan Paul).
7. See, for example, BLOOM, B. S. (1981) *All Our Children Learning* (New York: McGraw-Hill); and PAPERT, S. (1980) *Mindstorms Children, Computers and Powerful Ideas (New* York: Basic Books).

8, See, for example, APPLE, M. W. (1982) *Education and Power* (Boston, MA: Routledge & Kegan Paul); and GIROUX, H. (1981) *Ideology : Culture and the Process of Schooling* (Philadelphia, PA: Temple University Press).
9. See, for example, MASLOW, A. H. (1979) Humanistic Education. *Journal of Humanistic Psychology,* 19: 13-27; and ROGERS, C. (1983) Reaching person-centered issues in education. In Rogers, C. (ed.) *Freedom to Learn* (Columbus, OH: Merrill): 197-221,
10. See, for example, COLWELL, T. (1985) 'The ecological perspective in John Dewey's philosophy of education, *Educational Theory,* 35: 255-266; Dewey, J, (1916) *Democracy and Education* (New York: Macmillan); and JEWETT, A. E. and BAIN, L. L. (1985) *The Curriculum Process in Physical Education* (Dubuque, IA: WM. C. Brown): 28-29,
11. POPHAM, W. J. (1975) *Educational Evaluation* (Englewood Cliffs, NJ: Prentice Hall): 148.
12. NUNNALLY, J. C. (1978) *Psychometric Theory* (New York: McGraw-Hill): 245.