Wanted: More Cross-Cultural Research in Education[1]

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THE field of educational research is not young; but it is still immature. If we were asked by scientists from other disciplines and classroom teachers this question: How many educational laws are "lawful"? we might have great difficulty in responding. This means that education as a discipline has a long way to go before its independence can be truly established. There are many urgent educational problems which need to be solved, for example, education of the disadvantaged and education for "international understanding." Though the complexities and difficulties are recognized, these might be reduced if more cross-cultural research in education were conducted.

Carroll [2] recently defined and made a distinction between basic and applied research in education.

> Basic research . . . is more concerned with "understanding" and the attainment of knowledge about fundamental variables and their relationships; the prediction of socially important phenomena is of secondary concern, arising solely out of the laws and relationships discovered; and control of phenomena is often of only incidental interest except to verify a finding. Applied research is often concerned with the control of socially significant phenomena, or if control is impossible, at least their prediction. It is interested in the "understanding" of phenomena in terms of laws and relationships as a basis for prediction and control. Generally it starts with facts and propositions already established in basic science and proceeds to test them in particular situations and/or in particular combinations such that extrapolation from basic science is risky.[3]

Using this definition and distinction, cross-cultural research can and should be redefined. When an experiment is conducted to discover functional relationship between variables, it should be carried across cultures for replication. This basic methodological feature in natural sciences and in Russian psychological studies [4] is a necessary condition in educational research. And the understanding of a different culture has its own right for research. Therefore when a study is employed to understand a different culture, the difficulties in investigation, such as definition of a culture, sampling procedure, and the target population, should be recognized.

One example will be given here to illustrate each of these two kinds of basic research. Gage,[5] in discussing the need to develop theories of teaching, argued that research on teaching attempted to discover laws in teach-

[1] Appreciation is given to my colleague, Dr. Joey Dillard, for his constructive comments.

[2] J. B. Carroll. "Basic and Applied Research in Education: Definitions, Distinctions, and Implications." *Harvard Educational Review* 38:263-76; 1968.

[3] *Ibid.*, p. 271.

[4] Y. Brackbill. "Experimental Research with Children in the Soviet Union." *American Psychologist* 15:226-33; 1960.

[5] N. L. Gage. "Paradigms for Research on Teaching." In: *Handbook for Research on Teaching.* N. L. Gage, editor. Chicago: Rand McNally & Company, 1963. pp. 94-141.

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ing that are exempt from such factors as subject matter, grade levels, and teachers. In other words, the law is "culture-free." And this is the assumption on which Flanders' replication [6] of his Minnesota study on teacher influence and pupil achievement in New Zealand was based, though these studies were not experimental in nature.

The second example was that of Lambert and Klineberg [7] which attempted to understand children's views of foreign people and also used correlational design. The current interests of educators in promoting "international understanding" or "international cooperation," such as those stated in the aims of the World Education Fellowship, and of the ASCD-sponsored 1970 World Conference on Education, seem to have practical goals. The research conducted to achieve these goals is more of an applied type which needs as its basis "the facts and propositions already established in basic science" and whose findings will contribute to the attainment of educational knowledge.

To discuss the history of cross-cultural research in education, one might begin with a critique of an apparently closed-minded attitude toward this topic among American educators; and to start this, a personal experience may be useful. In the spring of 1967 I was assisting Roger E. Wilk of the University of Minnesota on an article for the *Review of Educational Research*. As a foreigner, I was more inclined to include related literature from other cultures. The general editor of the Review, in reacting to one of the references from a Scandinavian country, expressed his general doubt about foreign publications. Strangely enough, the article had been recommended by the issue editor, N. L. Gage of Stanford University. A critical attitude toward educational research should be reinforced. However, it is also, in my opinion, this attitude that has isolated American educators from other rich learning resources.

We all acknowledge that the most important and influential thinkers, except behaviorists, in psychological foundations of education come from Europe. Jean Piaget is an example. Today educational researches bearing on Piagetian thinking are numerous; and to quote his name indicates support for the status quo. What is more, a joint award of Phi Delta Kappa and AERA was given to Piaget and his co-worker Inhelder in February of 1969. This certainly highlighted American educators' acceptance of his ideas. But "only since Sputnik have many psychologists realized the grandeur of his theory of cognitive growth, and only recently have educators begun to consider its pedagogical implications," while his work "has been known in this country since the mid-Twenties." [8] I wonder whether the mere orbiting of Sputnik would have been sufficient to reawaken American educators' interest in Piaget if he had not received the endorsement of an *American* educator and psychologist, Jerome Bruner.

Even behaviorism is not exclusively American. For instance, American educational psychologists for a long time believed that classical conditioning was the only paradigm that guided Russian psychological and educational research, while in the Soviet Union other equally rigorous and useful models were invented to study such behaviors as language learning and attentional process. And the importance of the classical conditioning model to guide research on the effects of curriculum and instruction on attitudinal learning has only recently been recognized.[9, 10, 11, 12]

[6] N. A. Flanders. *Teacher Influence, Pupil Attitudes, and Achievement*. Washington, D.C.: U.S. Department of Health, Education, and Welfare, U.S. Office of Education, Cooperative Research Project No. OE-25040, Monograph No. 12, 1965.

[7] W. Lambert and O. Klineberg. *Children's Views of Foreign People*. New York: Appleton-Century-Crofts, 1965.

[8] M. Almy. "A Piaget Sampler." *Saturday Review*, April 20, 1968, p. 70.

[9] A. W. Staats and C. K. Staats. "Attitudes Established by Classical Conditioning." *Journal of Abnormal and Social Psychology* 57: 37-40; 1968.

[10] R. M. Gagné. *The Conditions of Learning*. New York: Holt, Rinehart & Winston, Inc., 1965.

[11] C. J. Early. "Attitude Learning in Children." *Journal of Educational Psychology* 59: 176-80; 1968.

[12] J. H. Litcher and D. W. Johnson. "Changes in Attitude Toward Negroes of White Elementary School Students After Use of Multiethnic Readers." *Journal of Educational Psychology* 60: 148-52; 1969.

Recent Studies

Achievement in subject-matter fields. Dyslexia has long been believed by Western scholars to be caused by neurological deficiency. This assumption, however, was recently challenged. Makita [13] found that only .98 percent of school children in Japan had reading disability, about ten times lower than in Western countries. If the sample of this survey is, as it seemed to be, truly representative of all Japanese children, then at most .98 percent of dyslexia can be accounted for by neurological deficiency. According to the investigator, the specific features of language and script are the most potent factors in the formation of reading disability. To support this hypothesis, he reviewed relevant literature in different languages. This hypothesis is worth testing cross-culturally.

The study, however, encountered several methodological problems. For example, using the direct approach of asking teachers to report the number of children having reading disability might prevent teachers from seeing problems, for Japanese regardless of age tended to be less extreme in their response style than Americans.[14] Second, the study, being correlational, does not allow us to infer causal relationship but strongly suggests many hypotheses; among them, in addition to reading objects, are the achievement and the teacher. In a well-planned study of mathematics achievement,[15] it was revealed that Japanese children scored the highest among the 12 countries studied. This indicates that it is highly possible that Japanese children were better achievers not only in mathematics, which uses universal language, but also in reading, which has its particular script.

With achievement as the dependent vari-

[13] K. Makita. "The Rarity of Reading Disability in Japanese Children." *American Journal of Orthopsychiatry* 38: 599-614; 1968.

[14] M. Zax and S. Takahashi. "Response Styles Among Japanese and American Children." *Psychological Abstracts*, Vol. 42, Abstract No. 2460, p. 236; 1968.

[15] T. Husen. *International Study of Achievement in Mathematics.* New York: John Wiley & Sons, Inc., 1967.

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able, what are the independent variables that affect Japanese superior achievement in mathematics? The teacher may be a variable. A large proportion of male mathematics teachers were found in Japanese schools.[16] But do they behave differently from female teachers or male teachers from other countries? What are the specific behaviors, if any, that cause the results in mathematics performance? Though no empirical evidence is available I am very much inclined to think that cross-cultural experimental studies will help us to answer questions of this kind.

With regard to cross-cultural study in teacher training, Dickson and his colleagues [17] made a good first step. They found that American teacher trainees, among others, scored significantly higher than their counterparts in the British Isles in professional knowledge. Better performance on these measures usually implies a better understanding of pupils. Yet why were American prospective teachers less student-centered than their counterparts in the United Kingdom? [18]

Achievement-related motivations. Several constructs have been invented to account for the observed differences in motivational behavior. Need for achievement and resistance to temptation are two examples. The validity of these constructs has been supported in cross-cultural studies. Need for achievement may account for not only economic development but also educational achievement of children.[19] The ability to delay for reinforcement, a goal in education and an important predictor for future achievement, is influenced by cultural conditions.[20]

Culture-fair intelligence tests. Psychologists and educators have long been interested in "intelligence" both as an independent variable to predict school achievement and as a dependent variable that may be affected by many cultural and educational conditions. A recent controversial article by Jensen [21] has revived the scholars' interest in "intelligence." Since traditional IQ tests have been accused of cultural bias due to their heavy loading on the verbal factor, "culture-fair" intelligence tests were constructed. Cattell's culture-free intelligence tests are probably most often used. Cattell [22] argued that people from different cultures were not different from each other on the mean scores.

However, the validity of so-called culture-fair intelligence tests is still questionable. For example, Alzobaie [23] administered this same test to a group of Iraqi high school students and found that science majors outperformed literature majors and that, as a whole, they were significantly inferior to their counterparts in the U.S. Since the Iraqi high school pupils were a highly selective group who had passed two competitive public examinations with equal standards for all students, the author argued that the two major groups should not differ on this intelligence test if it were, indeed, culture-free. He further suggested that familiarity with content might be an important source to account for the better performance by the science majors. Indeed among all cultural groups included in Cattell's report was an exception which showed that college students from Taiwan did score slightly better than any other groups.

Cattell, in interpreting these data, suspected a sampling bias. Indeed, objectivity in sampling is the first condition to be met in comparative cross-cultural studies. But some well-controlled studies also showed that first-grade Chinese Americans in New York

[16] *Ibid.*

[17] G. E. Dickson and others. *The Characteristics of Teacher Education Students in the British Isles and the United States.* U.S. Department of Health, Education, and Welfare, U.S. Office of Education, Cooperative Research Project No. 2518. Toledo, Ohio: University of Toledo.

[18] *Ibid.*

[19] D. C. McClellend. *The Achieving Society.* New York: D. Van Nostrand Co., Inc., 1961.

[20] W. Mischel. "Preference for Delayed Reinforcement: An Experimental Study of a Cultural Observation." *Journal of Abnormal and Social Psychology* 56: 57-61; 1958.

[21] A. R. Jensen. "How Much Can We Boost IQ and Scholastic Achievement?" *Harvard Educational Review* 39: 1-123; 1969.

[22] R. B. Cattell. "Are IQ Tests Intelligent?" *Psychology Today* 1: 56-62; 1968.

[23] A. J. Alzobaie. "The Cattell Culture-Free Test as Tried on Iraqi Students." *Journal of Educational Research* 57: 476-79; 1964.

City and Boston surpassed other ethnic groups on reasoning and spatial conceptualizations—abilities assumed to be detected in culture-free intelligence tests.[24, 25] Could this not be due in part to their visual experience with figural materials? [26] Chinese characters are mainly figural or pictorial, both characteristics of "culture-free" intelligence tests.

Creative development. Creativity, an ability independent from intelligence, has also been a main focus in cross-cultural research. Torrance,[27] for example, found that American and European children were more creative than Indian and Western Samoan children, and that creativity was related to the ideal pupil perceived by teachers in each culture.

One of the most significant and interesting findings was a fourth-grade slump in creative development, a phenomenon of cultural discontinuity. In order to discover whether this is present only in American white culture or is a universal manifestation, Torrance conducted a series of cross-cultural studies involving seven cultures which supported "the idea that cultural factors strongly influence the course of development." [28]

Studies reviewed thus far belong to basic research and use correlational designs. More experimental studies aimed at discovering educational laws should be conducted in cross-cultural perspective. Applied research designed to predict and/or control socially significant problems, such as cooperative control of world educational crises,[29] requires more well-designed studies, especially those of an experimental nature, to avoid methodological errors usually committed by studies to determine the effects of educational exchange on international development.[30]

Thus, I propose that a center for cross-cultural research in education be established which will conduct basic as well as applied research, will create better and more adequate methodologies in cross-cultural research, and will utilize human resources from other nations and thus solve an urgent problem—"brain drain." This should be the first step toward "working cooperatively on an international scale in education." [31] □

[24] C. S. Lesser, G. Fifer, and D. H. Clark. "Mental Abilities of Children from Different Social Class and Cultural Groups." *Monograph Society for Research in Child Development* 30 (4); 1965.

[25] S. S. Stodolsky and G. Lesser. "Learning Patterns in the Disadvantaged." *Harvard Educational Review* 37: 546-93; 1967.

[26] J. J. Wu. "Black and White: Some Yellow Views, In Response to the 'Jensen Article.'" Paper presented at a symposium held at Yeshiva University, New York City, May 7 & 14, 1969.

[27] E. P. Torrance. *Understanding the Fourth Grade Slump in Creative Thinking.* Washington, D.C.: U.S. Department of Health, Education, and Welfare, U.S. Office of Education, Cooperative Research Project No. 994, 1967.

[28] *Ibid.*, p. 301.

[29] G. Z. Bereday, editor. *Essays on World Education: The Crisis of Supply and Demand.* New York: Oxford University Press, 1969.

[30] Margaret L. Cormack. "International Development Through Educational Exchange." *Review of Educational Research* 38 (3): 293-302; June 1968.

[31] Alice Miel. "Toward International Cooperation in Education." *Educational Leadership* 25 (6): 499-501; March 1968.

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