

REPORTS

Research Projects in the McGill Faculty of Education

Eigil Pedersen and Gary J. Anderson

Research is rapidly gaining in importance at McGill's Faculty of Education. One evidence of this is the establishment of a Department of Educational Research; another is the great increase in the number of research projects now under way.

Research at the Faculty of Education receives financial support from a number of sources. Among the most important of these are the Canada Council and the Institute of Research in Education of the Province of Quebec. The following brief reports are of research projects, under way or recently completed, supported by these two agencies.

It is our intention to present information about other research activities from time to time in this *Journal*. In doing, we invite readers who are interested in particular projects to communicate with the researchers directly.

I — An Exploratory Analysis of the Elementary School Internship

Changes in attitude toward teaching and perception of the role of the teacher in the elementary school were compared for nineteen teacher interns at the University of Chicago and thirty-five similar interns in the MEET (McGill Elementary Education Teaching Teams) program at McGill. Although roughly similar in background, the Chicago group had somewhat higher scores in September on the Minnesota Teacher Attitude Inventory than did the MEET interns. With the difference in pretest scores statistically removed, however, the two groups of interns gained approximately the same amount on this instrument over the year. Both groups of interns changed in their perceptions of the role of the elementary school teacher and began to consider the teacher's role less transactional and more idiographic as the year progressed; that is, as being less of a compromise between the goals of the institution and the needs of the individual, and more of a concentration on the latter. One significant difference did occur: the Chicago interns increased their emphasis on the goals of the institution and the importance of a culturally appropriate role for the teacher, while the MEET interns perceived the teacher's role with less emphasis on its institutional aspects. Perhaps these differences reflect the inner-city school internship setting in Chicago and the predominantly middle-class culture of the MEET schools.

In order to examine one potential cause of intern change, each intern was asked to identify persons from the college and from his internship school whom he considered most influential on his development. Although the MEET interns changed in their expectations and perceptions of the role of the teacher, neither these changes nor their changes in attitudes toward teaching were attributable to the teacher role expectation scores of these influential persons. Furthermore, there was no evidence to suggest that interns tended to select as models persons who had similar scores at the beginning of the year.

Finally, to determine whether MEET interns were having an effect on their classes, six classroom climate variables as perceived by the pupils in the interns' classes were related to the personality profiles of the interns. A statistically significant overall relationship implied that the interns were shaping forces within the school. The nature of the relationship, moreover, seemed to indicate that interns who could be described as being troubled, anxious, nervous, tense, and group-oriented had classes containing friction, competition, and reported difficulty with school; while interns who were self-sufficient, self-assured, and independent tended to have classes characterized by pupil satisfaction and intimacy among classmates with less difficulty, friction, and competition.

Gary J. Anderson

II — Adjustment and Attitudes of Indian Students in Canada

This is the first study describing the social, emotional, academic, and financial problems associated with Indian students in Canada. It also discusses their attitudes towards Canadian people and society and toward certain Indian and Western social institutions and values. The analysis distinguishes between the problems and attitudes of students from upper, middle, and lower social class families, and also examines the significance of factors such as age, food habits, personality traits, duration and place of residence which influence the adjustment and attitudes of Indian students in Canada.

K. V. Chandrasekharaiah

III — Concept Formation — the Process of Categorization

In recent years there has been a proliferation of work dealing with aspects of concept formation, and the process of categorization as a major area of enquiry. There has not been any agreement on the methods of enquiry nor have similar enquiries necessarily been made on equivalent populations. In the words of Klein, Barr and Wolitsky, "It would seem profitable to determine the distinctions, if any, among these concepts, to continue to explore their dimensionality, and to study their hierarchical organisation. The

use of different measures for similar concepts makes comparison of different studies difficult. Large scale multivariate research on cognitive controls and the further delineation of individual cognitive consistencies promises to be an important contribution to our knowledge of personality organisation."

In order to derive a single test which might be applied to individuals of different ages, the Clayton-Jackson Object Sorting Tests was modified so as to provide three versions — an actual object form, a visual form (drawing and photographs of objects) and a verbal form as used by Clayton and Jackson.

Cross sectional testing at different ages is undertaken to determine whether comparable results are given by each version of the test. If so, then longitudinal testing becomes possible; thus the study of categorization in school children, particularly those between nine and thirteen, becomes possible.

Preliminary work established the equivalence of the forms at age twelve and age eighteen. Improved tests were applied to females of ages eleven, thirteen and eighteen to determine equivalence, and to find out the effects of age upon the number of categories formed, as well as the degree of abstraction of the categories used.

More recently the tests have been applied to males to determine whether or not a sex difference is to be found.

A pseudo-three-way analysis of variance design has been employed, in conjunction with the Duncan Multiple Range Tests. Age differences have been found to be significant between girls of eleven and thirteen but not between thirteen and eighteen. During the past year attempts have been made to use practice on allied concept formation tasks as learning devices for inducing gains in abstraction scores on the Clayton Jackson test. Work is also continuing on direct teaching of verbal concepts to young children followed by testing with a pictorial form of the test to determine transfer effects. Test for retention will be used at the end of the school year.

An initial report on this project was submitted to the Canadian Council for Research in Education at Winnipeg in 1967 and a second report was presented to the Canadian Psychological Association at Calgary in June 1968. Further reports will be made during the academic year 1969-70.

R. Edwards

IV — Investigation of the Cognitive — Behavioural Dimension of the Guilford Structure of Intellect Model

Guilford has proposed a model to represent the structure of intellect. The dimension most recently added was the behavioural one. One aspect of this is the cognitive behavioural dimension, operating across the products dimension. The dimension has been confirmed by Guilford et al. at grades eleven and twelve. The first step of the present research has been to establish the existence of the dimension at other grade levels. This has been done for

the grade eight level. It has been argued that results obtained on the cognitive and other operations of the behavioural dimension would be useful in the selection and training of entrants into the teaching profession. Certain hypotheses have been set up for testing, including the following: —

there is a positive relationship between age and scores on six selected tests of cognitive behavioural products;

there is a positive relationship between scores and amount of teacher training;

there is a positive but curvilinear relationship between scores and length of teaching experience;

training on similar material will induce gains in scores on these tests;

gain scores will be independent of other cognitive scores;

training on such allied activities should produce gains in teaching competence during teacher training experience, and such increase in competence should be related to the amount of practice on allied tasks.

Data has been collected, and continues to be collected, from teachers in training, and from practising teachers. The next step is to improve the tests as measuring devices and to elaborate on activities parallel to those in the test. It should then be possible to use these as instruments for improving scores on the behavioural dimension, and, hopefully, on activities related to teacher training, and teaching competence. Initial reports on the effect of the testing of students and teachers should be available during the coming academic year.

R. Edwards

V — Factors Associated with Educational Wishes and Expectations of Adolescents and Consequences of Discrepancies Between Wishes and Expectations

It has been noted that in our society, wishes generally exceed actual expectations. However, it has been suggested by R. K. Merton that where the discrepancy between wishes and expectations becomes very large, certain specific forms of deviant behavior may result from efforts to decrease the discomfort caused by the discrepancy. Merton has also suggested that where a society is structured such that, while certain goals become universally valued, the socially approved means of achieving them are denied substantial segments of the population, the incidence of deviant behavior will tend to be high.

Under a grant from the Province of Quebec's Institute of Research in Education, Kenneth Etheridge and Eigil Pedersen have adapted Merton's ideas to an educational context. Their research, recently completed, has shown that groups which do not have as good access to the means of attending college as others do indeed have a greater discrepancy between their educational wishes and plans. In addition, they have found that the educational analogues to Merton's deviant adaptations could be identified in the school context, thus

helping to shed light on social factors related to conformity, innovation (finding alternate means to college education), ritualism (going through the motions of schooling) and retreatism (these were labeled seat-warmers or "in-school dropouts") in the classroom.

Eigil Pedersen

VI — Factors Influencing the Impact on Students of Teachers as Advisors

The Institute of Research in Education of the Province of Quebec is supporting a study (at present being carried out by Maria Barrados and Eigil Pedersen) related to the identification of the personal factors which make some teachers more acceptable than others to students as advisors. The study is also attempting to identify student characteristics which make for greater receptivity to teacher influence on the part of the student. While the study is close to completion, it is as yet too early to present any actual findings. But it is felt that this study will make a contribution to sociological theories of significant others, and will, in addition, have certain practical implications for teacher and counsellor selection, training, and behaviour.

Eigil Pedersen

VII — Family Background and School Achievement and Experience Patterns of Children Related to Later Life-Styles as Adults

Certain school records giving detailed information about family background, academic ability and achievement, personality characteristics, and many other variables, have become available. The school involved was located in an urban area which can be described as culturally and economically disadvantaged, and the records cover a period of about eight years, beginning in the late 1940's. The subjects of these school records are now adults in their middle twenties or early thirties.

Under a grant from the Institute of Research of the Province of Quebec, Mona Farrell and Eigil Pedersen are investigating the feasibility of carrying out in-depth interviews with these subjects in an effort to determine some of the adult patterns of living — cultural, economic, family stability, and others — associated with some of the variables available on the record cards.

Eigil Pedersen

VIII — The Impact of Measured IQ and Estimated Intelligence on the Academic Self-Concept, the Level of Effort, and the Level of Educational Aspiration of the Student

IQ tests have been shown to be biased against culturally and socially

disadvantaged children, often resulting in under-estimates of their ability to do school work. Further, where such underestimates lead to inappropriately low teacher expectations for academic performance, the pupils may develop low academic self-concepts, low levels of effort, and low levels of educational aspiration. Phenomena such as these have led to policy decisions to discontinue routine IQ testing in some large public school systems.

In a study funded by the Canada Council, Eigil Pedersen is studying some possible implications of such policy decisions. It is assumed that where measured IQs are not available, teachers form their own estimates of intelligence. It is quite likely that such teacher-estimates are also biased, and may be just as damaging as measured IQ underestimates to the self-concepts, efforts, and aspirations of pupils.

A preliminary report of this research has already been published in this *Journal*.

Eigil Pedersen

IX — The Impact of the Teacher on the Level of Occupational Aspiration of the Student

Previous research has shown that teachers exert an influence on the educational aspirations of pupils, and that where the socio-economic status of the student is low, the influence of the teacher-estimate of pupil ability is more strongly related to educational aspiration than in the case of middle or upper-class students.

Under the sponsorship of the Canada Council, Maisie McRae, with the assistance of Eigil Pedersen, has completed a parallel study in which vocational aspiration, rather than educational aspiration, is the dependent variable. Professor McRae's research shows that where IQ is held constant in the analysis, the higher the perceived teacher-evaluation of ability to do school work, the higher the level of vocational aspiration; and the lower the socio-economic status of the student, the stronger the influence of the perceived teacher-evaluation of ability as to the vocational aspiration of the high school student.

Eigil Pedersen

X — The Effects of Two Programs of Physical Education Upon the Behavioural and Psychological Traits of Trainable Retarded Children

This study, conducted by J. H. Widdop, P. Barton, B. Cleary, V. A. Proyer, and A. E. Wall, investigated the effects of programs in (1) educational gymnastics and (2) perceptual motor-training upon the intellectual, social, and emotional behaviour of trainable boys and girls. The total population of a day school for trainable children (102 pupils aged 6 to 15 and having IQ's ranging from 31 to 49) participated in the two twelve-week programs.

Classes were randomly assigned to one of the two specially prepared programs and residually adjusted gain scores on six tests served as criteria.

The major findings of the study were as follows:

1. Improvements were made by all groups across all variables, suggesting that both treatments had positive effects upon performance.

2. Younger groups of either sex, under either treatment, improved more than older groups.

3. Consideration of the Block, Design, and Harris test results revealed that the only significant gain was made by the younger girls' perceptual motor-training group, which showed a gain at the .05 level in the Design results.

4. With younger groups, the educational gymnastics treatment appeared to have had the greater effect on the boys, while the perceptual motor-training seemed to influence the girls slightly more.

5. With the older groups, also, the educational gymnastics treatment appeared to influence the boys slightly more, while the perceptual motor-training seemed to have had rather more effect upon the girls.

6. Overall, the greatest significant increases were noted in the results of the Cowell, Vineland, and Peabody test results, although some quite considerable increases were observed in the other variables.

J. Widdop



The McGill Reporter

The McGill Reporter, which is the official weekly newspaper of McGill University, features educational reforms as one of its major editorial objectives. Each week, educators discuss new developments and learning projects. The McGill Centre for Learning and Development contributes a regular column.

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The very first issue of the **McGill Journal of Education** (Spring 1966) was concerned with "Activism." This was a popular topic, for the schools of Quebec were then beginning to try to adopt activist approaches to teaching as they sought to implement the recommendations of the Royal Commission of Inquiry into Education in the Province of Quebec (the **Parent Report**). The following paper is a principal's description of the emergence of an activist school. — Ed.

The Activist Program at Mountrose School

E. George Cochrane

The revelation that the Protestant School Board of Greater Montreal had selected Mountrose as one of its three "activist" pilot schools was received with mixed feelings by its principal and staff. While on the one hand we felt somewhat honoured to have been selected, we were uncertain as to what we were letting ourselves in for. Fears were expressed that the school would become an anarchist's dream with pupils running and screaming and leaping and fighting — all in the name of activism. Some teachers were worried lest they be subjected to minute direction. Others were certain that the school would be engulfed by tidal waves of curious and critical visitors.

None of these fears has materialized. It was understood by the PSBGM Curriculum Department and the staff of the school that the first year was to be a year of transition, a year in which we would move in the direction of implementing an activist program. But the manner in which we moved and the speed with which we moved were wisely left to the discretion of the professionals on the firing line.

And within the school, the policy was, and remains, that each teacher is free to develop her program in her own way. All that is demanded is that each be able to provide a plausible answer to the question: "What are you doing to justify your presence in an activist school?"

The first task that we, as a staff, undertook after learning that we were to become an activist pilot school was to define the term "activism." It was a term new to us, one that we had encountered only in the Parent Report. And so we turned to the Parent Report for guidance.

Via a translator's note we discovered that:

"Activist school" is a translation of the French "école active." "Activist" was chosen in preference to any more familiar adjective, since it implies with considerable accuracy the characteristics of the school envisaged for the province of Quebec by the Parent Commissioners. As a noun, the term is thus defined in **Dictionary of Education**