

# CARE for Research

The Centre for Applied Research in Education (or CARE) is situated in a building of special historical significance, for it was once the residence of the Vice Chancellor of the University of Malaya, the forerunner of the National University of Singapore. It is therefore appropriate that the very first thing that one encounters on stepping into House No. 1 is a very brief pictorial history of teacher training in Singapore that is displayed on both sides of the foyer.

A visitor will also notice that what goes on in CARE is somewhat different from what takes place in other parts of the campus. In the first place, the students who frequent the Centre are generally older and, since most of them are part-time Master of Education students, whose courses are held in the evenings, a gathering of students during the day is relatively uncommon, unless they are participating in a seminar at CARE.

The four academic staff of CARE are, of course, actively involved in research and are frequently found interacting with either people who are involved directly and indirectly in a number of research projects or with their computer terminals. A less apparent fact is that only the Head, Associate Professor Sim Wong Kooi, is a substantive staff member of CARE. Two staff members, Dr Soh Kay Cheng and Dr Cheung Kwok Cheung, are also staff of the School of Education, while Dr Lim Tock Keng is a Senior Research Officer on attachment from the Ministry of Education. But CARE has many visitors who are either collaborators, well-wishers or those who seek advice on matters pertaining to research.

Established within the National Institute of Education (NIE) as part of the Nanyang Technological University (NTU), CARE can be considered to be the educational research arm of NIE. Thus, apart from co-ordinating the M Ed programme, CARE's main function is to co-ordinate and promote educational research in NIE, especially those that cut across disciplines and facilitate application. In its interpretation of this function, CARE is attempting to initiate and conduct Research for Interdisciplinary Proaction in Education (RIPE).

An example of a RIPE project is the Primary Pupil Profiling Project (or 4Ps), which was started in mid-1991. The project is "inter-disciplinary" in the sense that it involves a team of researchers from a number of disciplines. Thus, besides CARE staff, NIE colleagues from Mathematics, English, Chinese and Psychological Studies, representatives from Research and Testing, Curriculum Planning and Schools Divisions of the Ministry of Education, and the principals and teachers from the two pilot schools are involved in the 4Ps.

The project is "proactive" in the sense that it hopes to develop a prototype pupil profiling system that is likely to improve school-based assessments. With the recent changes taking place in primary schools, following the implementation of the recommendations of the Report of the Review Committee entitled Improving Primary School Education, school-based assessments are becoming more important. Among the many unique features of the project are the following:-

- Achievement tests have profiling components - Number, Measurement and Geometry for Mathematics, and Reading, Writing, Listening and Speaking for English and Chinese - which incorporate hierarchical banding and other features derived from item response theory as well as diagnostic and other innovative features.
- Some Learning Abilities and Dispositions - Memory, Problem solving and a Pupil Characteristics Inventory, which incorporates measures of Self-Concept, Locus of Control, Parental Press and Reading Metacognition - are also assessed in order to determine the cognitive and non-cognitive correlates or conditions of learning.
- After pilot testing in two primary schools - Henry Park and Clementi Town Primary Schools - the instruments would be standardised by administering them to a representative sample of primary schools in Singapore.
- From the analysis of results, differentiated reports will be produced by the computer for different end-users administrators, teachers, parents and pupils - taking cognisance of their different needs as well as their common concerns.
- Remediation is an integral part of pupil profiling and the second phase of the project entails the development of remedial strategies based on the in-built diagnostic feedback arising from the way the instruments are constructed and the data are analysed and reported.

- With the ultimate concern for the improvement of teacher education, the project also hopes to produce some self-instructional modules on pupil profiling and remediation for school personnel.

A number of projects, which were initiated by the former Institute of Education (IE), have also come under CARE. Most of them were classified as Research for the Improvement of Teacher Education (RITE), for even though many were school-focused rather than Institute-focused, the intention was to provide an empirical knowledge base that would be useful for improving teacher education.

Examples of school-focused RITE studies are the following :-

- Learning Strategies and Metacognitive Skills, led by Dr Agnes Chang
- Jobs Orientation Backup System (JOBS), led by Assoc Professor Sim Wong Kooi and Dr Esther Tan
- Study of 58 Effective Schools, led by Dr K. C. Cheung

Examples of Institute-focused RITE studies are the following :-

- Predicting Student Performance, led by Dr Soh Kay Cheng
- Expert versus Novice Teachers, led by Dr Chen Ai Yen.

Another project which began almost nine years ago, and which is being funded by the Bernard van Leer Foundation, is a 10-year study of the Cognitive and Social Development of Pre-School

Children in Singapore. This project is both school-focused and Institute-focused. Thus, Phase One involved the development of a valuable data base which would enhance early childhood teacher education. Phase Two involved the training of teachers for centre-based interventions. The final phase attempts to involve the parents in early childhood education.

As most of these projects are nearing completion, attempts are being made to document them in the form of Research Monographs. In addition, CARE also publishes Research Papers, which reports on research undertaken mainly by CARE staff, who are encouraged to conduct their own individual research, besides being involved in team research, such as the RIPE and RITE projects. CARE staff have also been collaborating with a number of external organisations, both locally (e.g. the Association of Muslim Professionals and the Singapore Teachers' Union) and internationally (e.g. the South East Asian Research, Review & Advisory Group and the Consortium for Cross-Cultural Studies in Education) in various research projects.

In its effort to promote research among educational practitioners, CARE is also mindful of the need to publicise research. Other than the active participation of CARE staff in conferences, CARE has been able to arrange for a number of articles on Issues in Education, based on NIE research, to appear in the LIFE! section of the Straits Times. CARE is also developing an Exhibition Room to display aspects and materials of NIE research. Since the available space is very limited, besides the semi-permanent displays of research

thrusts of the various Schools, including CARE, and the periodic displays of some specific projects, "glimpses" of most projects would be "canned" in a Macintosh computer for selective projection onto a screen for visitors who are interested in some or all the projects.

What are CARE's future plans? For the immediate future, CARE has recently invited NIE colleagues to collaborate on a number of RIPE projects, namely:-

- Computerised Adaptive Testing
- Strategies for Reconciling Ideals and Realities in Education
- Adolescent Values and Aspirations
- Development of Psychometric Laboratory
- Eady Metalearning Strategies.

As the response has been quite positive, proposals for these collaborative projects are being submitted for funding over the next two years or so.

What are CARE's cares over the long haul? It should be apparent that CARE's activities are critically dependent upon the voluntary and co-operative contributions of NIE staff from the different Schools. In as much as interdisciplinary and proactive research may appeal only to the more dedicated professionals, the long term future of CARE is not very predictable. Nevertheless, CARE will continue to promote RIPE as Research for the Improvement of Professionalism in Education.