EDUCATIONAL RESEARCH IN EARLY CHILDHOOD DEVELOPMENT:
REFLECTIVE REVIEWS and LESSONS LEARNED from THREE COUNTRIES -
AUSTRALIA, SINGAPORE and MALAYSIA.

Seng Seok Hoon
Division of Psychological Studies
School of Education
National Institute of Education (NTU)
469 Bukit Timah Road
Singapore 259756
E-mail: SENGSH@NIEVAX.NIE.AC.SG
Fax: (65) - 4699007

Paper presented at the ERA-AARE Joint Conference
Educational Research: Building New Partnerships,
Educational Research Association of Singapore and the
Australian Association for Research in Education
25-29 November 1996
Singapore

As we approach the twenty-first century we are witnessing
important changes occuring around us especially in the field of
early childhood education and development. There is now a much
more supportive climate for increased interest and investment in
programmes favouring early childhood care and development.
Dramatic political, economic and social changes across the world
seem to allow people to think and hope about social problems and
solutions in new ways. We are entering a new decade which is
stimulating us to reflect and creatively think about the shape of
things to come, including visions of childhood in the coming
century.

In 1979 when the International Year of the Child was declared, an
opportunity was provided for new child-care and development
thinking and initiatives. Without doubt, the year generated a new
enthusiasm and interest in the child. Many projects were
undertaken at the national level to identify the needs and to
create awareness around the idea of the "whole child". In
addition a host of parental programmes were started and at the
same time there was an emphasis on formal preschools.

There has been good and significant progress made in projects
connected with the improvement of child survival and more modest
advances with respect to child care and development. Various
organisations formed at the time of the International Year of the

Child continued to be productive and active. However it is difficult to trace the effects of the work of these organisations because there has been no systematic mechanism to trace most of these international efforts.

Fortunately, there are several worldwide programmes from agencies and governments which have been participating and partnering together for years in their effort to enhance the growth and development of children to help them realize their individual and social potential. One such organisation is the Bernard van Leer Foundation. This paper focuses on three early childhood education research projects funded by the Foundation for review and reflection.

Bernard van Leer Foundation

The Bernard van Leer Foundation is a private institution based in the Netherlands. Originally created for broad humanitarian purposes, it now concentrates its resources on support for early childhood development. The central objective of the Foundation is to improve opportunities for young children who live in disadvantaged circumstances. It aims to help projects in the field and also advocates for policies and practices that will create improved conditions for children. With experiences gained from supporting hundreds of such projects around the world, the Foundation's philosophy and activities are embedded in the realities of life. It believes that in order to improve opportunities for young children it is necessary to work with the people who surround them and who can have an influence on their lives. This includes parents, siblings, other family members, communities, organisations that provide services, local and national governments and international institutions.

According to Hugh Philp (1989) in his penetrative book, "Barbs in the Arrow" which explores the work of the Bernard van Leer Foundation from 1965 to 1986, the mission of the Foundation in the eighties was to realise the human potential among the depressed, disadvantaged and deprived groups. Within this broad mission, there was a number of specific pointers to guide the policy of the Foundation. The concentration was upon the developing human being and the field of action was education in its broadest sense. Based on the years of experimental practice and research findings of the twenty or so years before then (1960-1980) it was found that the early years of childhood up to seven seem the most likely to yield the best results.

The Foundation research programme activity has also extended far beyond purely school bound education to include for example projects focusing directly on the child, the family and the community. The research activity has been spreading across many countries dealing with a subject area of "the disadvantaged" which is of great political and social sensitivity. Its involvement with any given country cannot therefore be merely a technical act but in some measure a properly drawn-out negotiated compromise between the Foundation's priorities and those of the nation concerned.

Mt.Druitt, AUSTRALIA

The Mt.Druitt project was in the beginning designated to be an example of a project to compensate the needs of the disadvantaged child. Situated in a new housing estate on the edge of a large industrial city, in an affluent society, the nature of the disadvantage was social and in a relative sense, economic. According to Philp (1989) the children were, for the most part reasonably well nourished, superficially well housed, well clothed and had excellent welfare services available to them from the state - at least in principle if not always in practice. There were good primary schools with reasonably well-educated, excellently trained teachers, a wide range of materials and equipment and a curriculum well up to international standards. Yet in Australia, particularly Sydney, these children were greatly disadvantaged.

The project sought ways and means to alleviate or remedy this. It was well and carefully planned in the light of the knowledge of the early 1970s and was conducted in the best of conditions. Well trained, well educated teachers, experienced in working with five
to eight year olds were selected and given a year of special training, partly in a university and partly in Mt. Druitt. Five different programmes were identified and developed for the study. These were cognitive, behaviouristic, competency, contemporary and home-based programmes specifically planned by well qualified curriculum programmers.

Contact was established with the health authorities who examined each child, conducted a diet survey and a nutritional survey and monitored general physical development. Lengthy interviews with parents established general demographic data, status, attitudes to school, methods of child rearing and so on. There was a deliberate attempt to discover the disadvantages, the deficiencies, the strengths and the weaknesses of the children and to design programmes directly and specifically related to these. The Mt. Druitt experiment was a sincere effort, in the best of conditions, to alleviate disadvantage by means of good quality compensatory early childhood education programmes.

The programmes, except for the home based, were carried beyond the preschool (which caters for children aged three years and seven months to four years and seven months) into the first two years of compulsory schooling in the same schools. In each case the curricular, methods and strategies were designed in terms of the original theoretical models. It may reasonably be said that this was an attempt at careful follow through. Children's progress was measured and monitored and the entire programme evaluated according to the best psychometric principles. With the inevitable losses due to family movement or death, the great majority of the children were exposed to three years of planned intervention. The children in the home based group entered normal classes in schools in Mt. Druitt and no efforts were made to develop special programmes for them.

At that time, in the context of New South Wales, paraprofessionals (untrained aides) were introduced into the classrooms. This had not been attempted previously in the New South Wales government schools and it was perhaps one of the most interesting outcomes of the project that teachers came to work enthusiastically with such people. There was a sustained effort to involve parents actively in the day to day work of the schools. This was both innovatory and in line with the compensation thesis. Unfortunately, no formal effort was made to replicate the project with further samples in the preschools. However, during the first three years (phase one of the project) the close relationship between home and school had become so apparent to the project team that major efforts were made in the second phase to involve parents in an active, purposeful way in the activities of the institution.

One of the most important structural outcomes of the project is the spread of preschools into the Government system, especially in the disadvantaged areas. Several of the innovatory programmes and many of the methods were taken over and adapted often in an improved form by schools and teachers in other places. The home based programme spread very rapidly in a number of quite different ways in Mt. Druitt itself. It has taken on a form of home visitors who work directly with parents and children on issues related to and not only to school problems but to general programmes of parenting. It was a novel and successful initiative.

The research evidence from the project also suggests that in the short term, pre-school and follow through programmes had little effect on school performance. Variables such as health and specific intervention programmes do not in general contribute significantly. What really matters in terms of gains as well as in terms of specific performance are the socioeconomic variables. It rapidly became clear that the important lasting effects on the children were much more closely related to social and attitudinal development than to cognitive variables. Furthermore, in some sections of the study, according to Philp, it was found that child rearing practices within the homes had changed in the course of the project and afterwards, but these had probably more effect on younger siblings than on the children in the original group.

It is also of significance that although the home-based programme
for any one child lasted for only one year and the child was then
ed into the kindergarten along with other children, nonetheless
the effects of home-based were longer lasting than those of any
other programmes. Programmes which linked home and school were
more likely to have lasting effects on the children than those
based solely within the school. As reinforced by Philp many
times, any effective early intervention programme must focus on a
great deal more than academic instruction even if its goals are
no more than attainment of competence in the basic skills
fundamental to school success. If we are really serious about the
prevention or amelioration of disadvantage then we must look to
the child's entire background, physical and social and start
working closely and cooperatively with the total communities into
which children are born and in which they receive their early
socialization.

To sum up, it may be fairly said that the major outcomes of the
Mt. Druitt project for the Foundation was the demonstration that
programmes entirely within schools, however well designed and
executed, cannot have the major effects hoped and planned for
unless they are strongly supported by parallel programmes within
the home and community.

Growing up in SINGAPORE

The Singapore project has been one of the few large scale
research programmes supported by the Foundation. The nine year
longitudinal study was begun in 1983 aimed at investigating the
basic cognitive and social developmental processes of preschool
children, ages three to six years. The research was carried out
by the National Institute of Education, the one and only teacher
training institution in the small republic island. The project
also involved intervention strategies that attempted to enhance
the children's competencies over the nine years of study.

The project was planned with the following specific aims:

* to measure Singaporean pre-school children's cognitive growth
  in terms of their ability to master basic language skills, to
  understand simple mathematical concepts, and to perform tasks
  that require them to distinguish, to compare, to reason and to
  perceive relations as interpreted through performance of
  Piagetian tasks.

* to study, through observation, children's social behaviour in
  the structured environment of their classrooms and

* to investigate and monitor selected aspects of the children's
  home and school environment as it affected their cognitive and
  social development.

The focus of the Singapore project is very much competency-
oriented. This is in line with the pragmatic nature of
Singapore's educational system and its pre-occupation with
developing human resources. Competency is here defined as a skill
or set of skills which are developmental, hierarchical and
necessary for survival and for the mental and social well being
of children.

At the school level, it falls into two categories: prescribed
competency and non-prescribed competency. Prescribed competencies
cognitive, social and psychomotor are those areas stressed by the
Ministry of Education. They are thought to provide an essential
basis for the education of primary school children in Singapore.
Non-prescribed competencies are not included in the primary
curriculum in the first year of schooling. In schools, the
 teaching of prescribed competencies are done through subjects
such as mathematics and languages while non-prescribed
competencies are not taught directly but are embedded in all
types of learning activities.

There were three phases in the Singapore longitudinal project.
The first phase (1983-1986) involved the collection of normative-
descriptive data about children's cognition and social
development. In this phase of the project, a total of 3000
children aged three to six years were tested. The aim was to find
out about children's thinking, their language proficiency and
their ability to relate to others. Altogether each child had to
complete 26 tasks on a one-to-one basis.
The baseline data were analysed and fed into the second phase of the project (1987-1990) which involved centre-based intervention. From the data collected in the first phase and from the problems highlighted, it was clear that the English Language skills of children in non-private kindergartens needed looking into, and this was done through training teachers and centre-supervisors to adopt a more integrative approach in language teaching, using communicatively-based teaching methods. The two year training programme started in 1987. Assessment was both formative and summative and there was a significant gain in the measure of success. The focus of the third phase (1990-1993) was on the development of a partnership in the child's education, bringing together parents, trainers and pre-school personnel, representing a triadic relationship among home, school and society.

Altogether a total of 3091 children were tested drawn from 40 pre-school centres, which were classified into five centre types on the basis of ownership or affiliation, namely MOE (Ministry of Education) PAP (People's Action Party) PA (People's Association) NTUC (National Trades Union Congress) and Private (affiliated to the YMCA, YWCA and some churches).

The dissemination of research findings to teachers, parents and trainers has been an important role of the research project team. For this is very well documented and papers and reports have been presented at seminars and conferences.

In summary over the period of nine years, the findings from the project had supported the universality claim of certain characteristics in children. Singapore pre-schoolers are not much different from children elsewhere with respect to their thoughts and behaviour. The longitudinal study revealed that the young children were definitely aware of the importance of the English language and they expressed emerging bilingual behaviours in their readiness to learn.

Additionally, in the area of social development, children showed gains over the pre-school years in sharing and cooperative behaviours. The children's performance on social tasks showed that young children learn through imitation and direct instruction indicating that early childhood teachers have been successful in socializing their pupils. Although the sample in the study was composed of equal numbers of boys and girls, little attention or data was collected on gender differences. Parents in Singapore, especially among the Chinese ethnic group, place greater emphasis on the education of their sons. It was expected that gender difference in social and cognitive abilities may vary among the different cultural groups.

In 1992, a pilot study indicated that all boys and girls show developmental trends in their performance across all tasks replicated from the Phase One study. There is a high percentage of success in bilingual ability of these preschoolers especially from the Chinese preschoolers in private kindergartens. The five to six year olds stood out as more competent in their language and social performance. However the girls did better than the boys in the language tasks and the boys are more successful in the mathematics tasks. In the social tasks, the boys tend to share and cooperate less than the girls especially the three to five year olds. Both boys and girls found the cognitive tasks most difficult. One possible explanation is the emphasis that preschools have given to the teaching of school subjects rather than to thinking or to the development of cognition in the curriculum.

The executive director of the Bernard van Leer Foundation Dr. Rein van Gendt in 1993 noted that the National Institute of Education's project in Singapore has been unique in that not only
has it provided the first comprehensive data on the social and
cognitive development of children in Singapore, but it has also
led to intensive training programmes for teachers and supervisors
from about 40 pre-schools. It has, furthermore, led to the
development of relevant parent and community involvement
strategies aimed at reinforcing the home environment in improving
early childhood care and development in Singapore.

The Malaysian Child Development Project

Interest in child development in Malaysia had been mounting in
the eighties due to the growing number of working mothers
especially among the professional class. This created an
awareness for stimulating children's intellectual growth and
parents were generally anxious to provide for their children a
headstart in life in an attempt to ensure their academic success
in primary and secondary schools later on.

In 1986 the Bernard van Leer Foundation undertook to finance a
study into the physical and psychological development of
preschool children from the urban advantaged, urban
disadvantaged, rural and estate sectors of the Malaysian society.
For two years, instruments were constructed and refined to
measure the physical, social and emotional development of
preschool children.

The study was carried out in three districts in Selangor Darul
Ehsan, a state on the west coast of Peninsular Malaysia and the
Federal Territory of Kuala Lumpur. The rural areas drew their
economic resources from the fishing, rubber estate and oil palm
plantations. About 3099 three to six year old children were
selected from these areas and grouped under the urban advantaged,
the urban disadvantaged, rural and estate sectors. The main aim
was to investigate the influence of the environment on preschool
children's development as well as to ascertain the ceiling and
basal line of their development.

It was found that urban advantaged children were more advanced in
physical, cognitive, language and socio-emotional development
than children in the other three disadvantaged groups. Generally,
estate children were the least advanced in all these areas. Rural
children and children in the urban disadvantaged areas did not
differ much in any of these areas of development. Urban
advantaged children, without doubt, had better facilities
(physically, materially and educationally) than urban
disadvantaged, rural and estate children. It was highly possible
according to Chiam (1991), that they were also better off
psychologically, being more likely to be given better care and
attention. Of the three disadvantaged sectors, the estate
children might have the least conducive environment for
intellectual development.

The parents from the estate sector were educationally and
occupationally inferior to parents in the other two sectors,
although the amenities in their homes were not worse off than
those in the urban disadvantaged or rural areas. Being poorer
and having parents with little or no education, estate children
had been deprived of physical and psychological environments
which stimulate intellectual growth and development. There
seemed to be little difference in the educational and
occupational level of the parents in the urban disadvantaged and
rural seduced parents possessed a better educated parents possessed a better
knowledge of good childcare and their financial status, this had
enabled them to give their children a better quality of life. The
data showed that father's education had a closer relationship to
children's development than that of the mother. In addition, the
smaller the family size the better the quality of childcare and
this was significantly related to children's physical, language
and socio-emotional development.

Distinct developmental trends were observed in all the variables
investigated, implying that, during the preschool years, physical,
cognitive, language and socio-emotional development were related
to chronological age. However, within each age group, there was
quite a range in the level of development. There was also
evidence of the presence of critical periods of development which
are ages at which optimal development occurs. The greatest
differences in cognitive and language development were observed
between the ages of four and five years which may be related to
the transition from preconceptual to intuitive thinking. In
cognitive development, the differences between the advantaged and
disadvantaged children were much more obvious in the higher order
cognitive skills of reasoning and problem solving. The number of
advantaged children who could reason increased steadily as the
age of the group went up. But the increase in the number in the
disadvantaged sectors was much smaller than the increase in the
urban advantaged sector.

Except for physical development, significant gender differences
were not recorded in cognitive, language and socio-emotional
development. The only exception was in problem solving: the boys
in all the age groups were found to be consistently better than
the girls. No ethnic differences in any of the areas of
development were observed in the urban advantaged sector.
Although ethnic differences showed up in a number of variables in
the urban disadvantaged and rural-estate sectors, the differences
did not follow any consistent trend.

The study proposed a few childrearing practices to facilitate
children's development such as nutrition, immunisation, hygienic
and stimulating environment, feelings of self worth and less
emotional abuse. There was also an emphasis on parent education
and its important role in the development of the young child.
Several preschool practices were also recommended to foster
children's emotional and social development. In addition,
preschools themselves could play a significant role in developing
an altruistic and caring generation in a multi racial country
like Malaysia.

LESSONS LEARNED

This paper is not a history of the Bernard van Leer Foundation.
Rather it is a brief look at three large scale sample projects
supported by the Foundation in the eighties. The accumulated
experiences of these three studies show clearly some of the
changes in research focus that have occurred over those years
within the Foundation's grant awarding schemes. Whereas in the
sixties the emphasis was on the negative aspects of the
disadvantaged child as such, it has increasingly shifted so that
the later emphasis now tend very much to stress on the positive
aspects of any programme or project.

The Mt.Druitt project is characteristic of the compensatory type
of project whereas the later projects - the Singapore and
Malaysian studies are indicative of the turn of emphasis from
compensation for deficiencies to development of the child's
innate potential. Another apparent change is the shift from
intervention studies to more interactive types of studies. This
stresses the social dimension as a powerful determinant in the
relationship patterns with the child and his or her family in the
community.

One key observation made from the Singapore and Malaysian
projects is the movement from the cognitive or intellectual
focus of development and interaction to the whole child as the
psychological dimension which determines the nature of activities
to follow. This is in line with the Foundation's effort to
incorporate within its programmes key factors touching upon and
influencing the course of the child's life in addition to
explicitly cognitive factors. What is implied is a broadening of
the concept of education to focus in greater depth on how it can
support the total development of the child.As suggested by Philp,
a starving child cannot learn and the wider definition of
education would include not only language and cognitive
development, but also, depending on the setting, health
education, social, emotional and cultural development.

All the three projects include quite a high proportion of people
living in the urban areas. Industrialisation in the developing
world has increased this problem. More and more people are living
in cities, are born in them or drift to them. Disadvantaged
children are therefore more politically and socially visible and
more likely to seek for help from governmental agencies.

Mt.Druitt project on the outskirts of Sydney in Australia is a
fringe urban area of low socio-economic status filled with young
people, with a high unemployment rate, few community facilities
and a disproportionately large number of preschool children. When
the project began among the community of some 70,000 people, the average age was about eight years; the mean age of the adult population was only 22 or 23 and the nature of the project had to reflect this demographic set of characteristics.

The Singapore project on the other hand, covers the whole small island city state. It is a highly industrialised and commercialised city with a well developed housing structure specifically designed to cope with the rise in housing shortage but not forgetful of the needs of children. There are no city slums nor any rural areas. The Malaysian study was concerned with children in the city as well as the rural areas on the outskirts of Kuala Lumpur. Not all of the Foundation projects can be fitted into neat and tidy categories just described though there has been a well directed move toward more research work in the city areas.

The Foundation currently supports approximately 130 major projects in some 49 developing and industrialised countries. In the three projects cited in this paper, one key common agenda in each of them is to address early childhood issues of wider concern to the community as a whole. Families and communities are often mobilised for the sake of the well-being of their young children. It was found that a focus on early childhood development can act as an effective entry point for community development and this can offer the potential for wider social change.

Both the Mt. Druitt and the Malaysian Child Development projects are supported by the relevant state governments and the Foundation whereas the Singapore study implies a ten year cooperation with the National Institute of Education. In all of them, the Foundation neither makes one-time financial handouts nor is it responsible for structural funding. The institutional development and organisational strength of the individual recipient country is a pre-condition to the effective implementation, sustainability and dissemination of whatever child development activities they are responsible for. As noted by the executive director himself, the emphasis is on the support of innovative operational projects or research projects that have relevance for policy development, and have a potential for disseminating their results. Since the processes of implementing a project do require time, a project may last from three to six years and sometimes even longer.

One important lesson learned from these three projects is with respect to the future growth of such large scale projects. This aim is not primarily to move in the direction of more number of such projects in more countries but rather to capitalise on the experience generated by the projects within the country itself. The strategy is to support the development of innovative field-based approaches in the domain of early childhood care and development and simultaneously also to influence policy and practice by drawing on relevant project experiences and sharing this with a wider audience. There is therefore a strong sustained attempt to analyse the experiences of individual country projects in order to disseminate the distilled knowledge to other practitioners and policy makers within and between countries.

It is evident, therefore, that a comprehensive child-care and development programming strategy, seeking real and lasting improvements in survival, growth and development, must be conceived in such a way that it works at all levels according to Philp (1989). It must do more than provide direct attention to the child; it must strengthen and improve the various environments within which the child is developing. A few approaches can be considered such as attending to children in centers; supporting and educating caregivers; promoting community development and strengthening institutional resources and capacities. However, any overall project for enhancing child development must pay attention to the special emphasis given to each approach. The emphases must vary considerably depending on the conditions of the particular country in which the project is being developed.

In conclusion, whatever the local features of these three research projects, the center of their attention, though expressed in different forms, has been a set of fundamental...
partnerships between caregiver and child, between researchers and practitioners and between communities and professionals. The Bernard van Leer Foundation is interested in the integral development of the education of young children. Increasingly the Foundation seeks to establish partnerships with other organisations that address different but related problem areas like health and housing. Such a cooperation where each complements each other's work is potentially very effective, given the fact that problems in each country are of an integrated nature. Country projects are encouraged to establish such partnerships at the national and local level.

REFERENCES