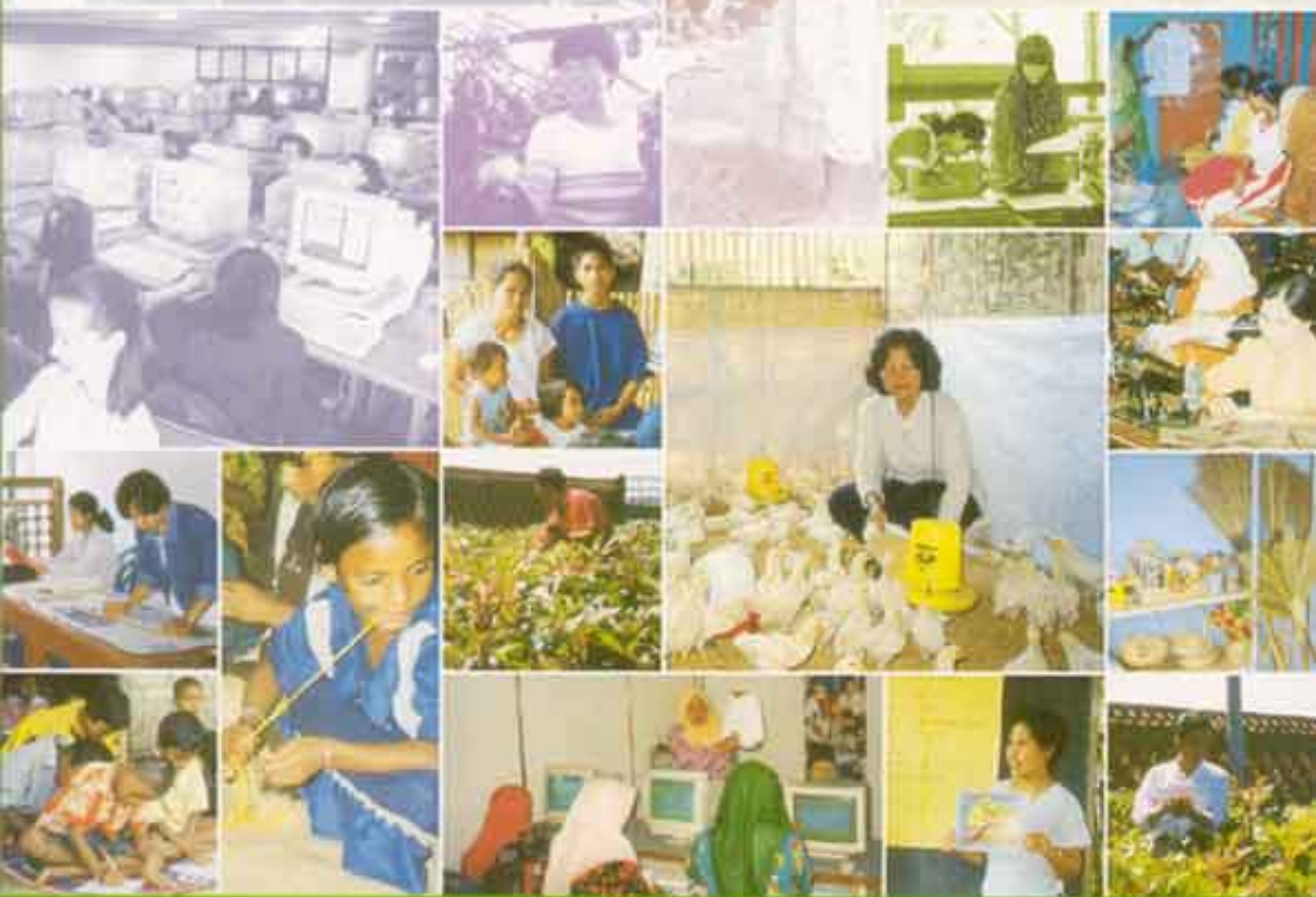


# Innovations in Non-Formal Education

A Review of Selected Initiatives from the Asia-Pacific Region  
Undertaken by APPEAL Resource and Training Consortium (ARTC)



United Nations Educational,  
Scientific and Cultural Organization  
UNESCO Bangkok

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# Introduction

APPEAL's programmes in the Member States operate from the regional and sub-regional levels to the grassroots level through a network of selected governmental and non-governmental organizations involved in the promotion of basic education and lifelong learning. Among these, the APPEAL Resource and Training Consortium (ARTC), consisting of leading institutions in the Asia-Pacific region, has been formed as a co-operative institutional mechanism to support and facilitate APPEAL's mission to achieve the goal of Education for All (EFA) and greater opportunities for lifelong learning. To date, there are eleven members of ARTC:

- Asia Pacific Cultural Centre for UNESCO (ACCU), Japan
- Dhaka Ahsania Mission (DAM), Bangladesh
- The Faculty of Science, Information Technology and Education, Northern Territory University, Australia
- Indian Institute of Education (IIE), India
- Institute for Rural Advancement (INFRA), Malaysia
- International Research and Training Centre for Rural Education (INRULED), People's Republic of China
- Korean Educational Development Institute, Republic of Korea
- Department of Non-Formal Education, Thailand
- Directorate-General of Out-of-School Education, Youth and Sports, Indonesia
- Regional Centre for Educational Innovation and Technology (SEAM EO/INNOTECH), Philippines
- National Observatory of Kazakhstan, Kazakhstan

During 6-10 September 1999, APPEAL convened an ARTC technical meeting at the Korean Educational Development Institute, one of the ARTC members. Participants recommended that ARTC members should undertake joint research projects to document and disseminate the innovative approaches to basic education and lifelong learning implemented in the region. The meeting, therefore, focused on the organization of these projects. ARTC members selected the following topics for investigation.

1. ***Innovative approaches to functional literacy for poverty alleviation*** (Bangladesh and China)
2. ***Innovative approaches to non-formal education for sustainable development*** (India, Indonesia, the Philippines and Thailand)
3. ***Innovative approaches to lifelong adult learning*** (Australia, Korea and Malaysia)

This document is divided into two sections. Part 1 is a synthesis of the reports from the nine member institutions. Part II presents the highlights of the research findings contained in the nine reports. The complete reports of the participating member institutions are available at APPEAL, UNESCO, Bangkok.

For further information, please contact APPEAL at [appeal@unesco-bkk.org](mailto:appeal@unesco-bkk.org).

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# Synthesis

## Introduction

Education is the first challenge of every young person in the world. It is the key to a better life. The young generation in Asia Pacific is growing up in a world of rapid change. The challenges of the 21st century are different from those of the 20th century. The young generation is growing up in a world of rapid change. The challenges of the 21st century are different from those of the 20th century. The young generation is growing up in a world of rapid change. The challenges of the 21st century are different from those of the 20th century.

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# Innovations in Non-Formal Education

## A Review of Selected Initiatives from the Asia-Pacific Region

### I. Introduction

Countries in the Asia-Pacific region present a wide range of settings with respect to the development of basic education. While some countries of the region have fully achieved the goal of ensuring that all children have access to and participate in basic education, other countries are still struggling to extend basic education to all children of school age, as well as to achieve acceptable levels of adult literacy. However, regardless of the status of formal primary schooling, most countries of the region have actively promoted non-formal education (NFE) programmes for out-of-school youth and adults. In many countries, NFE forms an integral part of the official programme of basic education, often with independent organizational arrangements as well as programme budget and portfolio of activities.

Apart from national NFE programmes initiated by governments, the last decade has also witnessed the emergence of a number of non-governmental initiatives in this area. In fact, a number of innovative efforts and indigenously formulated programmes to extend basic education to adults have emerged through the work of NGOs in several countries. By their very nature, NFE programmes remain locally specific and varied in their content and concerns. As a result, information on the progress made towards the goal of Education for All (EFA) through non-formal education programmes and their innovative ideas and actions has been scarce and unsystematic. Thus the case studies reviewed here attempt to fill this gap with respect to the knowledge base available on NFE.<sup>1</sup>

The main objective of conducting the case studies was not to arrive at any generalization through quantitative analysis. The purpose was to come out with analytical documentation of the reality on the ground and to highlight the manner in which educational problems have been addressed in widely differing contexts. There was also an attempt to describe the innovations using empirical data from the field and to present the unique lessons emerging from them. Each study has used empirical analysis in a focused manner to bring out the special nature of the design of the innovation, its actual functioning in the field, and the benefits flowing from it to the youths and adults involved.

### II. A New Perspective on NFE

The case studies also have to be viewed in the context of the new emerging vision of non-formal education underlying current discourses on education. Under the banner of lifelong learning, experts all over the world have increasingly called into question the relevance of rigid structures related to content and the delivery of educational inputs. This point of view has been well corroborated by the Report of the International Commission on Education in the 21st Century, entitled *Learning: the Treasure Within*. One could say that comprehensive education delivery without formal organizational structures had largely remained a matter of philosophical discourse till recently in the absence of enabling technological support systems. But recent developments in the field of information and communication technology (ICT) have expanded the possibilities for non-institutionalized learning opportunities in an unprecedented manner. These changes

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<sup>1</sup> The case studies were part of the joint research on *Innovative Approaches to Basic Education and Lifelong Learning in the Asia-Pacific Region* conducted under the auspices of the APPEAL Resource and Training Consortium (ARTC), UNESCO Bangkok. See the list of case studies at the end of this review.

have also contributed to a significant shift in the conceptualization of NFE. The various case studies reviewed here clearly bring out some of these conceptual shifts in defining the scope and functions of NFE.

Traditionally, NFE has been viewed only as a kind of *second chance* education for those who have missed out on formal schooling. This secondary status has also contributed to its depiction as a second-rate alternative to formal education programmes. However, the case studies reviewed here exemplify NFE as a normal and legitimate means of education. Although they view NFE in a broad perspective, one important factor runs through all of the studies – extending education to those who are generally outside the formal education framework. Taking such a view is in line with the call given by the Jomtien Declaration to adopt a broadened vision of basic education, one that has been reaffirmed by the Dakar Framework of Action for EFA. The scope of the programmes thus is not limited to specific age groups. Also, viewing NFE in terms of lifelong learning allows us to include all actions and innovations that facilitate continued learning even for those who have had the benefit of initial schooling. NFE is no longer simply adult and continuing education. This point is well illustrated by the innovative efforts reviewed in this introduction.

The lifelong learning perspective of NFE has also influenced the nature of the learning inputs provided as well as the modes and contexts of delivery. Invariably, all the case studies reviewed here emphasize the need for ensuring that the learning inputs provided are relevant to the lives of the people. This is one of the distinguishing features that contrasts with the traditionally standardized inputs provided by formal education. Education becomes a continuing endeavour rather than something that begins and ends with the acquisition of formal qualification. Finally, NFE as conceived in the case studies provides scope for learners to determine the pace and content of learning by themselves.

### III. Exploring the NFE Scene in Asia through Case Studies of Innovations: Varying Contexts and a Wide Range of Concerns

The countries of the Asia-Pacific region undoubtedly present a vibrant scene with respect to non-formal education programmes. These programmes were well under way even before the Jomtien Conference in 1990. In fact, by then most countries in the region had already established separate organizational arrangements for promoting NFE as an effective channel of basic education. The Asia-Pacific region presents a very wide range of settings not only with respect to basic education progress but also with regard to other demographic and development indicators. This wide variation is well represented in the nine countries from which the case studies come.

**Table 1: General Characteristics of the Nine Countries Represented by the Case Studies**

Countries	Population size (millions) 1999	Avg. Annual Pop. Growth Rate (%) 1990-97	GNP per capita Avg. Annual Growth Rate (%) 1996-97	HDI 1999
Australia	19	1.2	1.8	0.922
Bangladesh	128	1.6	3.7	0.44
China	1254	1.1	7.8	0.701
India	998	2.1	3.2	0.545
Indonesia	207	1.8	2.8	0.681
Malaysia	23	2.3	5.2	0.768
Philippines	74	2.3	3.6	0.74
South Korea	47	1.0	3.8	0.852
Thailand	60	1.2	-1.3	0.753



**Table 2: Status of Basic Education**

Countries	Adult Illiteracy 15+ age group % 1995		GER Primary % of relevant age group			Pupil Teacher Ratio 1997	Public expenditure on primary and secondary education as % of all levels 1993-96	Public exp. on edu. as % of GNP 1993-96
	M	F	T	M	F			
Australia	-	-	101 (1997)	-	-	18	69.5	5.6
Bangladesh	51	74	95.6 (1999)	97	94.1	61	88.6	2.9
China	10	27	104.3 (1999)	104.8	103.9	24	68.3	2.3
India	35	62	90.3 (1997)	98.5	81.5	42	66.0	3.4
Indonesia	10	22	113 (1997)	-	-	22	72.9	1.4
Malaysia	11	22	95.3 (1999)	-	-	19	76.3	5.2
Philippines	5	6	118.8 (1999)	118.3	119.3	35	-	2.2
South Korea	1	3	98.3 (1999)	97.9	98.8	31	81.1	3.7
Thailand	4	8	91.3	92.9	89.7	21	73.2	4.1

- Sources:
1. 2001 World Development Indicators, The World Bank.
  2. A Synthesis Report of EFA 2000 Assessment for the Asia-Pacific Region, UNESCO, Jan.2000.
  3. Knowledge for Development, World Development Report, The World Bank, Oxford University Press, 1998.
  4. Human Development Report 1999, UNDP, Oxford University Press.
  5. EFA Developments Since Dakar: India Country Report, E-9 Ministerial Meeting, Beijing, Government of India, New Delhi
  6. Selected Educational Statistics, 1999-2000. Ministry of Human Resource Development, Government of India, New Delhi

## An overview of the case studies

The most important feature of all these case studies is that they have been indigenously designed to keep the local context in view. Yet most of them have been initiated on a fairly large scale with substantial coverage of the relevant target groups. Also, several of them are government sponsored or supported programmes ensuring the sustainability of the model in the long term. The methodology adopted for preparing the case study also varies considerably. While the Korean case study of the Credit Banking System is essentially descriptive, the Malaysian study is based on empirical investigation involving a sample of more than 600 participants in activities that were part of an innovative computer literacy programme. The Indian and Chinese studies consist of a number of locally specific programmes. Two broad considerations seem to have guided the methodology adopted. First, the case study (or examples of programmes considered together) in each country attempts to capture the current concerns and priorities in NFE. Second, regardless of the quantitative data used, each case study focuses on a qualitative analysis of the innovations under consideration and draws broad implications for NFE in the country.

In line with the variety one finds with respect to the conditions characterizing different countries in the region, the case studies are also varying in their nature and scope. For instance, in countries like Bangladesh and India, which still have to go a long way to ensure basic education for all children, the natural choice has been to adopt innovative methods to reach out-of-school youth and adults. Both these countries have chosen to illustrate these innovations through NGO initiatives. On the other hand, Malaysia, which has made tremendous progress in recent years in terms of providing basic education for all, has chosen to focus on extending the benefits of information technology through continuing education programmes. South Korea, which has been able to practically universalize education up to the secondary level, presents a unique case of how to expand opportunities for tertiary education through an innovative system of credit banking.

The innovations described in these case studies fall into three broad categories:

- Functional literacy and adult education for poverty alleviation as illustrated by the case studies of Bangladesh and China
- Non-formal education for sustainable development, which is the focus of case studies from India, Indonesia, the Philippines and Thailand
- Non-formal education as lifelong learning, which is the focus of case studies from Australia, Malaysia and South Korea

## Bangladesh

As is well known, NGOs have played a significant role in the promotion of basic education in Bangladesh. This is particularly true with respect to non-formal education activities. An empirical study was carried out to assess the performance of NGOs using innovative approaches to functional literacy and poverty alleviation. The study was based on both primary and secondary data.

During the empirical survey, the activities and contributions of 16 NGO projects were closely examined. Investigators found that all of the projects gave considerable attention to linking literacy with economic activities. Six of them provided loans through small savings and credit programmes in order to encourage people to become self-dependent in the long run. Technical and vocational education was an integral part of all project initiatives.

The investigation revealed that discernible changes took place in the economic and social conditions of the respondents following literacy training. Family size was reduced, monthly incomes and land under cultivation increased significantly, and houses of clay and straw were replaced by tin shed structures. Moreover, the number of unemployed persons was reduced by 81 per cent, the number of industrial labourers increased, dependence on unhealthy water sources decreased, personal incomes rose in 91 per cent of cases, and general awareness about the environment increased. On the whole, the project initiatives helped increase 1) income levels, 2) knowledge and skills, 3) awareness of the value of education, 4) health awareness, 5) environmental awareness, and 6) adoption of birth control practices.

The study raises some important issues on sustainability of the project initiatives, which invariably depend on Government or external sources for continued operation, as the beneficiaries of the programmes were poor and in spite of their best intentions could not contribute even a token amount. The case study also points out the need for shifting the operational costs to beneficiaries if operation of the programmes is to be sustained.

## China

Three projects are described as examples of innovative approaches to functional education. The main focus of all three projects is on linking education with poverty alleviation. Two of these studies are under the larger scheme of *Prospering Villages through Sciences and Education*, initiated by the China Association of Agriculture in 1995-96. This scheme got under way after many specialists carefully investigated conditions of agricultural production and the everyday lives of local farmers. The basic goal of the project is to make science and education easily accessible to farmers, especially the poor, and to help them use these as tools for poverty alleviation and improving the quality of life. The project has expanded to encompass more than 1,250 villages across 22 provinces. More than one million farmers from 250 thousand households have directly benefited. In economic terms, overall benefit from the project is around 1.5 billion Yuan.

From 1996 to 1999, more than 2,400 educators and experts participated in the implementation of the project. Among them 30 per cent of the experts in agriculture stayed in the villages to advise farmers in adopting innovative agricultural practices. One hundred training schools of agricultural science and technology were set up and over 1.5 million farmers have received training in these schools. It is estimated that the increase in actual income per person through the project has been about 100-500 Yuan per year.

Gaichazui Village is in the hilly region of Shansi Province. It is one of the most backward areas in the whole province. The project brought many changes to the lives of the people in the village. The main strategy has been to combine the basic and vocational education of adults with the introduction of science and technology in agricultural production. A second example also deals with the implementation of the same programme on science and education in another village (see box).

### Village Prosperity through Science and Education in Chaichang

**Chaichang Village**, located on Taihang Mountain in Hebei Province, has 303 households and 1,140 residents. Of over 16,700 Wu<sup>2</sup> of land, only 1,000 Wu are cultivated and good for grain farming, the remaining area being mountainous. In 1995, before the project started, the annual income per person in the village was 1,085 Yuan. In 1996, Chaichang Village was selected as a pilot site for the project. The China Association of Agriculture, Hebei Agriculture University and the Government of Yi County worked together with the farmers in Chaichang Village on an overall development plan for fruit-tree planting, grain production and animal husbandry. Professors at Hebei Agriculture University and other specialists came to the village with new seeds of grain, fruit-tree samples, and advanced skills and technologies in farming. Evening classes were set up for the adults to learn new farming and husbandry skills. Regular school students also got an opportunity to acquire new knowledge and skills in agriculture. The villagers used the knowledge and skills in their everyday farming and, as a result, by 1998 the annual income per person in the village had increased to 3,300 Yuan, almost two times the income in 1996. Eighty per cent of households bought color TVs and built new houses. Over 5,000 metres of high quality road have been constructed using the collective funds of the village. Regular public bus connections were established from the village to the county seat, provincial capital and even to Beijing. The living conditions of the villagers have been greatly improved.

The third example also deals with poverty alleviation. But the main focus of the project has been on training women to use small loans through setting up self-help groups. The locally derived training content and schedule consisted of four major parts: literacy learning, skill training, basic life strategies and protection of women's rights. A flexible working schedule was adopted to suit the convenience of women. Participatory methods were widely used in the learning process. Women were no longer mere passive listeners. They actively participated in recognizing problems, making plans, sharing experiences and teaching each other. As one of the outcomes of the workshop, many women not only used the loans they received, but also the knowledge, skills and ideas that they had picked up from the workshop.

One important lesson illustrated by these local projects is that inter-sectoral co-ordination is critical for lifelong learning and also for linking education with poverty alleviation.

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<sup>2</sup> Wu refers to a local measure of land holding.

*"I have been to school for several years, but did not finish elementary school. I was not a good student and did not like the school life. About my literacy level, oh....., I can read my family records (genealogy), one of my uncles taught me to do that when I was very young, because I was the only boy at that time in the whole family, and do some basic accounting. What do I like to learn, oh....., Now I'm in an evening class learning how to grow herbs. I like the learning and enjoy trying to grow new plants."*

....Quoted from a nineteen-year-old young man in a mountain village in Guizhou Province

These three local projects taken together stress that poverty alleviation is not just a matter of greater income or economic development. It involves increasing the quality of life and the capacity for self-development. Therefore, education plays a significant role in the process of poverty alleviation. This role demands a changed perspective on community involvement, skill training and the ways that we transmit relevant knowledge to the poor.

## South Korea

During the 1990s, the Korean government made significant efforts to reform education in preparation for the 21st century. One of the major goals of the educational reform was to develop a mechanism to ensure that people in Korea could further their education at any time and any place during their lives. The result was the Credit Banking System (CBS), an open education system that recognizes diverse learning experiences not only in school but also out of school. When a student accumulates the necessary CBS-approved credits, she or he can obtain an associate or bachelor's degree. The CBS aims to provide all citizens with greater access to various educational opportunities and to foster lifelong learning.

The case study described in this report consists of an empirical investigation with two specific objectives: 1) to review the development and implementation of the CBS, and 2) to assess its quantitative and qualitative achievements through analysis of documents and feedback from students and administrators of educational institutions.

The CBS was introduced in 1998 and its achievements have been significant in both quantitative and qualitative terms. Quantitative achievements include the standardization of 151 curricular programmes and the development of syllabi for 1,717 courses. There are presently 323 accredited educational institutions. In the year 2000, there were 12,630 students enrolled in the CBS. Among students, 44.2 per cent said that they enrolled in the CBS to continue their studies, and 40.4 per cent plan to use their degrees from the CBS for employment and promotions. Both students and administrators agreed that the CBS makes a significant contribution to improving an individual's learning ability as well as earning ability. Most of the administrators agreed that the increasing enrollment in the CBS clearly indicates society's recognition of the CBS as an important innovation. These administrators also noted that the upward trend in the CBS enrollment would improve the quality of education. Students are generally satisfied with the course content and the quality of instruction provided. However, they are not satisfied with the library services and facilities. Although minor improvements are needed in regard to management and student perception, the CBS has the potential to contribute towards the establishment of a society of lifelong learning in Korea.

By granting credits for various out-of-school learning experiences, the CBS helps to transform a closed education system into a more open one. Moreover, the CBS provides opportunities for higher education to those who have longed for degrees but have not been able to obtain higher education through formal institutions. Finally, the CBS improves the social status of educational institutions within the non-formal education system. Consequently, these institutions are able to compete with universities and make significant contributions to the overall development of human resources in the country.

## Australia

This case study highlights an innovative education programme aimed at improving Queensland farmers' skills in strategic business planning. Experimental learning cycles and action learning methodology were put to use in the programme as it attempted to help participants assess their current situation and take control of the future.

The study aimed at identifying a best practices model of adult education that supports the principles of adult lifelong learning. It focused on answering four critical questions: 1) Do all aspects of the educational innovation respect the needs of adult learners? 2) Does the programme invite facilitators and participants to think differently? 3) Does the programme actively engage adult learners in the learning process? 4) Do the outcomes of learning facilitate social change, justice and empowerment?

The analysis found positive changes in practices resulting in a better quality of life, more profitable farming, and improvements in both land and other natural resources. Participation of learners in the programme was not just prompted by the profit motive, but also by its implication for changes in aspiration towards natural and human resource management, farm business management, and production. Among those who participated in the programme, a change in outlook, increased self-confidence and improvements in intra-group relations could be clearly observed. On the whole, the programme led to the empowerment of farmers and farm family members, because the process of learning strengthened confidence in their own ability to make strategic choices.

## India

The Indian case study consists of six examples of specific local projects. Two of these are efforts in remote tribal regions inhabited by ethnic minority groups. Sustaining their livelihood and improving their economic conditions are combined with imparting basic literacy and numeracy skills. In addition, four innovative programmes provide basic education to out-of-school children, with particular focus on girls. All of the innovations are selected from efforts of NGOs working in the field of NFE.

One example is a centre established for rural women in order to upgrade their skills and influence their patterns of livelihood. The Centre for Education and Development for Rural Women (CEDRW) is a unique effort to empower women by raising their educational and economic status (see box).

### The Centre for Education and Development of Rural Women (CEDRW)

The Centre was set up in 1993 in order to develop a new system of rural education that empowers women to become agents of rural transformation and to initiate overall socio-economic change in their villages. A significant feature of the projects undertaken by CEDRW is that they adopt the pedagogical approach of Paulo Freire combined with Gandhian principles of education for empowering the rural population. The main objective is to stimulate the oppressed to reflect on their existing conditions and subsequently take action to bring about the required changes through people's participation.

The CEDRW at present is engaged in the operation of various activities, such as women's self-help and savings groups, vocational programmes for girl drop-outs and for women aged 15-45 years, camps for health, nutrition and personal development, and training local farmers and artisans through *farmers clubs*. The CEDRW has also set up a child recreation centre to demonstrate that parents

and the community play a major role in the integrated development of the child during the preschool days. Experience in running the CEDRW over the last eight years has shown that its interventions have been successful in mobilizing the rural community, especially in regard to education and the development of women.

The Vigyan Ashram Project deals with the introduction of basic technology in a remote rural area with a population of around 10,000. Creating access to modern technologies among the rural population and imparting basic management skills to them are the main purposes of this programme. It effectively combines the concerns of lifelong learning, poverty alleviation and sustainable development. It has in fact provided a useful model for transforming secondary schooling in rural areas with a distinct slant towards local needs and yet integrating most modern technological innovations into the school curriculum.

Two additional projects aim at increasing the participation of out-of-school children in primary education through non-formal education programmes. For instance, the PROPEL project implemented near Pune in the western part of India was a pioneer in creating innovative approaches to decentralized curricula for out-of-school children. It demonstrated the ways and means of preparing locally relevant curricular materials that would still have parity with nationally established standards.

## Integrated Abujmarh Tribal Development Project

Bastar is one of the most backward districts of Madhya Pradesh State. Within that district, there is a small area known as the Abujmarh Hills inhabited by a tribal group called the *Hill Marias*. This area is described as a *tangled knot of hills* difficult to access that remains cut off from the rest of the world for nearly half the year. The Integrated Abujmarh Tribal Development Project, covering an area of about 4,000 sq. km., 230 villages and a population of about 26,000, was set up in 1994-95 with the objective of eradicating illiteracy, ill health and economic deprivation among the Hill Marias, and thereby ensure their sustainable development. The community based learning centre set up under the project carries out a number of activities relating to education, health, agriculture, and watershed development. The project has succeeded in significantly improving the methods of farming. Also, the watershed development activities have increased water resources for economic purposes through the construction of a number of storage tanks, percolation tanks, and dams.

The importance of this project cannot be understood by a statistical presentation of its results. One must relate project activities to the extreme backwardness of the area, which is not only remote from modern infrastructure but also devoid of any basic amenities of life, virtually cut off for almost half the year from other areas.

Another important project provides primary education to out-of-school children in Rajasthan. It was part of a larger programme of EFA called *Lok Jumbish*. The uniqueness of the project was that each NFE centre emerged as the result of a participatory planning exercise by the local community. Community members took charge of identifying and enrolling out-of-school children and also of recruiting a local educated person to conduct classes. This involvement instilled a greater sense of accountability and ownership among the children and their parents, and significantly reduced the dropout problem in primary education.

These projects emphatically highlight the value of non-standardized, locally relevant curricula as the key to success in NFE programmes. It is this characteristic which significantly distinguishes NFE from other routine programmes of education.



Similarly, standard delivery mechanisms of education in the formal sector are often created according to notions of supply. In contrast, the non-formal education facilities created through innovative efforts occur directly in response to demand by the local community. This feature has a demonstrable effect on the ownership and accountability of the local community and is significant for the provision of educational facilities even in the formal sector.

A third point brought out by the examples is that in India, striving toward basic Education for All, NFE programmes continue to focus specifically on the marginalized sections of society, even though the nature of their interventions is significantly different from those used in formal school programmes.

## Malaysia

The case study from Malaysia is an empirical assessment of the effectiveness of a lifelong learning project for capacity building among rural youth and adults. Having achieved a high level of basic education development, Malaysia in recent years has focused on improving the skill levels and learning capabilities of the rural population. It is in this context that a massive programme of adult computer literacy training was launched to familiarize the rural populace with the use of computers.

### Computer Literacy Training Programme, Malaysia

In 1996 the Ministry of Rural Development launched a nation-wide programme called the Rural Vision Movement to promote the villagers' self-reliance in the process of planning, implementing and evaluating community development programmes in their rural communities with minimal assistance from the authorities. Part of the emphasis of this programme was on the provision of continuing education opportunities through courses organized for the Village Development and Security Committee members (JKKK). One of the activities under the Rural Vision Movement training was the course on basic computer use so that the rural communities were not left behind in the nation's ICT development process.

The Institute for Rural Advancement (INFRA) organized the first computer literacy training programme in Peringat, Kelantan, in September 1997. Since then INFRA has continuously offered the programme to members of JKKK, with a total of 20 such training courses conducted in 1998, 16 in 1999, and 21 in 2000. These courses were conducted at several training centres such as the Rubber Industry Small-holders Development Authority Training Centre, the Federal Land Consolidation and Rehabilitation Authority Training School, INFRA and a few other privately-owned training centres.

For the years 1998, 1999 and 2000, average class size for the basic computer literacy course was 26 participants. A total of 57 courses were conducted during the 3-year period for a total of 1,482 participants. Of these learners, 61 per cent were male and 39 per cent female. The age range of participants was between 15 and 76 years of age with an average age of 38. Although the training programme was designed for the JKKK members, it also addressed general issues. In its prospectus, INFRA has consistently specified that at least one in five or 20 per cent of the prospective participants for each village must be a youth, and one a woman.

The case study focuses only on computer literacy training programmes for adults organized and conducted by INFRA, although there are several other such attempts by other organizations. The course is offered to adults who have never had the opportunity to learn about computers while they were in school. The qualitative approach afforded an in-depth understanding of the meaning of attending the computer literacy

training programme from the participants' perspective. Secondary data from a survey at Kampong Bayangan, a Rural Vision Movement village in Keningau, Sabah, indicated that the household ratio for personal computer ownership was 1:2, i.e., a single computer for every two households. Altogether there were 75 computers for the 1,080 residents (a 1:14 computer to resident ratio). Among the residents, 34 per cent were able to use a personal computer. Overall, 11 per cent of the residents (121 people) were skilled at personal computer use. The 26-36 year age group had the highest percentage (30%) of people with computer skills.

### In the words of a learner

Aminah (not her real name), a housewife, talked about attending the computer literacy training programme at first as an escape from the somewhat monotonous routine of house-keeping, cooking and looking after the children. According to her, learning about the computer was something new. *"Now at least I know what using the computer is all about. Hopefully with whatever newfound abilities that I have, I can teach my children how to use the computer. Although we don't have a computer at home now, we will eventually get one."*

In relating their experiences and the impact of computer knowledge, participants emphasized that they were more confident in using information technology for the purpose of developing their village.

### Indonesia

The case study from Indonesia consists of action research on the effectiveness of the Packet B programme, which is the non-formal equivalent of formal lower secondary level schooling, as a basis for sustainable development at the community level. Specifically, the study carried out a longitudinal analysis of information on the implementation and effects of a Packet B programme at the Cilandak Resource Learning Centre, Sanggar Kegiatan Belajar (SKB) Cilandak. The area chosen for the investigation consisted of people living in low income slum localities. The programme chosen for the study was unique because it linked NFE inputs with economic development through income generation activities. The study focused in a comprehensive manner on all aspects, namely the teaching and guidance process, the management of the Packet B programme, the management of the income generation programme and the motivation of parents.

An important feature of the innovative programme was the training provided in a variety of occupational skills. The learners themselves, in consultation with parents and instructor, chose the skill areas they were interested in, and therefore the activities got full support from the family. Some of the skill areas in the programme included 1) selling newspapers, 2) washing motor vehicles, 3) producing cakes and other snacks, 4) growing peanuts, 5) raising poultry, 6) selling fried rice, fruit, canteen food, animal fodder, etc., 7) sewing and embroidery, 8) silk screen printing, and 9) making foot-wear. This non-traditional emphasis on transmitting skills chosen by the learners instead of those found in a standardized curriculum greatly helped in promoting the study of Packet B through the NFE channel.

Initially, parents were not quite enthusiastic about having their children continue their studies through the Packet B programme. However, once they realized the value of the vocational component integrated with the programme, they became very supportive. The study highlighted the effectiveness of combining educational inputs with income generation inputs for raising the motivation levels of parents and learners as well as for improving family incomes of people living in low income slum areas.

## *Philippines*

The empirical study reported by INNOTECH assesses the effectiveness of learning materials developed for the non-formal education accreditation and equivalency system. The specific focus is on the programme implementation and its effectiveness at the Sandiwaan Centre for Learning. The training programme and learning materials under study emphasize new skills and knowledge required for raising the standard of living amongst the people through better health practices, better food, increased income, improved family life and more direct participation in community and civic activities. It is an example of designing training or capacity building programmes for sustainable development, viewed as lifelong learning linked to economic improvement.

The following were the most commonly cited reasons for learners attending the NFE Accreditation and Equivalency Programme: 1) to gain recognition/certificate; 2) to continue education in the formal system; 3) to be able to enter the world of work; and 4) to be able to establish their own business. The programme modules most used were those that helped learners to develop their problem solving and critical thinking skills, as well as their numeracy skills. The latter was especially true for the out-of-school youths. On the other hand, the modules most preferred by adult learners were those that focused on developing skills to handle small businesses.

In-depth case studies of some of the learners revealed the four most common reasons given by them for dropping out of the formal school system and joining the NFE Accreditation and Equivalency Programme. These were poverty, family problems, lack of flexibility and too many assignments!

Besides imparting practical knowledge and skills, the programme enabled many learners to gain self-confidence and a sense of self-worth. Many realized the importance of education and a few were drawn away from previous bad habits like drug addiction when they joined the programme. Even for those who failed to pass the accreditation test, the experience still opened doors for opportunities as they felt that they were now more fully in control of their destiny.

The case of the Philippines, as with those of Thailand and Australia, demonstrates the enormous potential of NFE programmes to significantly impact the lives of out-of-school youth and adults. They also emphasize that a concerted and continuous effort must be exerted to fully realize this potential.

## *Thailand*

The case study from Thailand assesses the effectiveness of a unique effort to build capacity among the rural population for community-based action in marketing. This effort consists of a specially designed basic course on shop management in the rural context. The project also demonstrates an effective approach to sustainable development in rural areas through context specific participatory action.

This case study has to be viewed in the context of the economic crisis faced by the country. We must also bear in mind the consequent demand for providing education that is linked with improvement in the quality of life, on the one hand, and the Government's commitment to make nine years of education compulsory and free as part of its national policy of Education for All. It is in this context that the Department of Non-Formal Education chose to experiment with the concept of community trading centres as a contribution to sustainable economic development. The important feature of this example is that it is a joint effort of the Department of Non-Formal Education, the Department of Internal Trade and several NGOs.

## Community Trading Centres, Suphanburi

An experiment in innovative approaches for NFE was conducted in a rural community of U-Thong District, Suphanburi, 100 kilometres from Bangkok. Most of the population of this province consists of farmers. This was a co-operative project between the Department of NFE, the Department of Internal Trade and community based NGOs. Learners consisted of those of working age who wanted to continue their education at non-formal education centres. The specific objective of the project was to propagate knowledge and develop skills in the management of village shops, enabling community members to understand the principles of trade and the resulting community stores contributing to an improved local quality of life. Such activity within the NFE framework strengthens the community in many ways and contributes toward overall economic development of the locality.

The use of this NFE approach to develop vocational skills as well as income generation for community members proved to be very effective due to its flexibility. It not only solved the community's economic problems but also helped improve their quality of life.

This innovation is an excellent example of inter-departmental collaboration, which is essential for operating programmes that cut across the educational and economic needs of the people. The traditional approach to NFE, which is limited to education activities, needs to be replaced with such innovative inter-sectoral programmes.

Success also depended on community members' participation in the administration and management of the programme. Another critical factor is the involvement of and co-operation from local community based organizations. It is necessary to create such organizations wherever local NGOs are not already operating.

### IV. Some Lessons from the Case Studies

As was mentioned earlier, the case studies were not conducted in order to draw generalizations. Rather, the contexts characterizing different countries as well as the nature of the different case studies are so unique that it is difficult to derive any conclusions that are universally applicable. In fact, such contextual relevance and flexibility are in the nature of any non-formal education programme. However, we can find some significant lessons that emerge from a review of the various case studies.

1. ***There is a need to broaden the definition and scope of NFE.*** Traditionally NFE has been viewed as a substitute for providing basic education to those who have failed to benefit from the formal school system. Consequently, the focus of NFE in many countries has remained confined to programmes for imparting basic literacy and numeracy to out-of-school youth and adult illiterates. Skill-building activities related to the productive life of individuals are also seen as a sequel to literacy programmes and therefore directed at neo-literates. The latter programmes have been called variously ***post-literacy and continuing education*** programmes. The case studies reviewed here point out the inappropriateness of following such a narrow definition of NFE. Instead they espouse lifelong learning as the appropriate framework for NFE programmes. Adopting such a liberal perspective has meant that the preparation of learners for tertiary education, training learners in basic ICT skills, and improving their business and marketing capabilities have become legitimate concerns for NFE. This expanded viewpoint has brought a greater variety of learners into the fold of NFE and consequently has helped raise its status throughout the region.
2. ***Community involvement is critical for success.*** It is clear that any NFE programme functions as a conglomerate of several micro-systems, each with unique locally relevant inputs and processes.

Therefore, the general macro-systemic approach to educational planning and management that functions in the formal sector is unsuitable for NFE. Success stories in NFE effectively bring out the importance of involving the people themselves in the planning and management of every aspect of the NFE programme at the grassroots level. This is important not only for making the NFE initiatives more relevant to the needs of the people, but also for creating a sense of ownership among the participants in the programme.

3. ***NFE must be based on local demand.*** The provision of educational facilities in the form of schools is generally determined according to norms of distance and population size. These norms are also used to allocate funds under the assumption that the demand for the institutional facilities already exists. Although this approach appears to be appropriate where standardized education services are provided on a universal basis, it often fails when local needs and conditions are taken into account. In fact, we usually find that NFE facilities provided in such a way remain under-used or ignored in some places, resulting in a waste of precious human and physical resources. The case studies in this book demonstrate the need for adopting a demand-based paradigm for initiating NFE programmes. Such an approach not only ensures effective use of the resources but also reinforces accountability among the users, who thereby cultivate a sense of ownership.
4. ***Continued government support for NFE is essential.*** In most countries NFE continues mainly to meet the educational needs of marginalized groups, as illustrated by the case studies. This is so regardless of the nature of the programme or the level of education provided. Consequently, NFE programmes are invariably dependent on support from Government or from donor agencies. This raises the question of sustainability. The case studies emphasize the need for continued support from Government, particularly when NFE programmes deal with basic education or cater to the economic development needs of marginalized groups. The support required is both financial and technical, as often without initial guidance community members find it difficult to establish a programme. Of course, one finds in many countries of the region a clear trend for gradually rolling back state financial support when the programmes become invariably linked to income generating activities and the creation of self-help groups.
5. ***Linking literacy with economic activities is essential.*** Education to be meaningful has to contribute towards improvement in the quality of life of individuals and to the overall development of the community. This principle is applicable to NFE programmes also. Thus NFE programmes must grow beyond imparting literacy skills and offer functional education that can promote economic development. Such an approach avoids the creation of a dependency syndrome among the beneficiaries and makes them self-reliant in the long run. Many of the programmes reviewed here attempt to integrate academic inputs with economic activities.
6. ***Does basic education have a role to play in poverty alleviation?*** Poverty continues to haunt many parts of the developing world. What should be the nature of education in a situation where people are so poor that they are unable to satisfy even their basic needs of food and shelter? This is a question that is generally sidestepped by the formal school system. However, NFE, which essentially targets poorer sections of society, cannot avoid addressing this issue. We find that several of the case studies deal with programmes that try to link educational inputs directly with measures to reduce poverty. It is difficult to conclude if they are fully successful, because levels of poverty are often defined relatively in each country. However, the empirical evidence collected in some of the case studies indicates the potential of well-designed NFE programmes to alleviate the problems of the people arising out of poverty.
7. ***NFE is a multi-sector activity.*** Educational planning and management have invariably been viewed as the concern of a narrowly defined educational bureaucracy. This group may in some cases expand with the addition of experts and NGO staff who implement programmes in the field. Although such a structure may prove workable in the formal sector, NFE programmes that attempt to link education with

the economic and social life of the people cannot function in this narrow framework. NFE programmes as illustrated by the case studies have to be conceived and implemented viewing the participants in a holistic manner. This demands that functionaries from education departments collaborate with professionals and administrators from other departments that directly impinge on the lives of the people. In fact, the collaboration has to be both inter-sectoral involving different government departments and inter-agency involving both government and non-government organizations.

On the whole, the case studies clearly demonstrate that NFE is gaining a strong foothold on the education scene in many countries of the Asia-Pacific region. Interestingly, this is so not because of the inadequate spread of formal education facilities, as NFE is expanding even in those countries with a high level of basic education coverage. In fact, NFE is evolving in most countries into a potential mechanism for meeting the emerging educational needs of the people more effectively than the formal education system.





# Alternative Approaches to Functional Literacy for Poverty Alleviation in Bangladesh

Part II

## The Case Studies

1999/2000

Project A, covering the two villages of 100% in Bangladesh, was  
funded by the Government, Ministry of Education, Bangladesh  
University of Education, Dhaka, and the Bangladesh Rural  
Workers' Union, Dhaka.

Project B, covering the two villages of 100% in Bangladesh, was  
funded by the Government, Ministry of Education, Bangladesh  
University of Education, Dhaka, and the Bangladesh Rural  
Workers' Union, Dhaka.

Project C

Project D, covering the two villages of 100% in Bangladesh

Project E, covering the two villages of 100% in Bangladesh

Project F, covering the two villages of 100% in Bangladesh

Project G, covering the two villages of 100% in Bangladesh

Project H, covering the two villages of 100% in Bangladesh



# Innovative Approaches to Functional Literacy for Poverty Alleviation in Bangladesh

## I. Introduction

At first glance, it appears that the numerous NGOs in Bangladesh (nearly 1,000 of them) are mostly concerned with micro-credit programmes, with very few offering innovative programmes combining functional literacy and poverty alleviation. A closer look shows that the following NGOs do provide poverty alleviation packages in their functional literacy programmes:

1. Bangladesh Association for Community Education (BACE)
2. Bangladesh Rural Advancement Committee (BRAC)
3. Centre for Mass Education in Science (CMES)
4. Dhaka Ahsania Mission (DAM)
5. Friends in Village Development Bangladesh (FIVDB)
6. Grameen Shikkha
7. Proshika
8. Swanirvar Bangladesh (SB)
9. Underprivileged Children's Educational Programme (UCEP)

(Details about these organizations and the programmes they offer are included in the full version of the study report submitted to APPEAL, UNESCO Bangkok.)



This study consists of an empirical survey of 16 projects administered by 8 of the above organizations. (Because the Grameen Shikkha projects are small and at the pilot stage, this NGO was not included in the survey.) The purpose of the survey was to obtain information about the impact of each NGO's innovative functional literacy programmes on the well being, financial and otherwise, of programme participants. The survey also asked for general information about the operations of the programmes administered by the projects.

## II. Analysis and Interpretation of Survey Data

### A. Data on learners

The field survey obtained data on 288 graduates from the literacy programmes of 8 NGOs that adopted innovative approaches in their programmes to alleviate poverty. A structured questionnaire was designed for the purpose. The results of the field survey are presented below.

#### 1. Distribution of respondents according to age and gender

Of the 288 respondents, 226 (78%) were women and 62 (22%) were men.

Around 80 per cent of the respondents were 10 to 30 years of age. Amongst them 34 per cent fell within the 16-20 age group, followed by 17 per cent aged 21-25. About 15 per cent belonged to the 26-30 age group and 13 per cent to the 10-15 age group. The remaining 21 per cent of the respondents were between 31 and 45 years of age. Only 2.8 per cent of them were over 45.

#### 2. Occupation, religious affiliation and marital status

Many of the respondents (44%) were housewives. Also represented were industrial workers (10%), students (9%), electricians (8.7%) and garment workers (7.3%). About 5 per cent of the respondents were unemployed and another 5 per cent were small traders. The remainder were casual labourers, rickshaw pullers, van drivers, etc.

The majority of the respondents were Muslims (82.3%), with fewer numbers of Hindus (17.4%) and Christians (only 0.3%).

Roughly half of the sample (50.3%) were married while 46.9 per cent were unmarried. Only 2.1 per cent were widows and 0.7 per cent were divorced.

#### 3. Family size

The data indicated that 54.2 per cent of the respondents lived in families with 5-7 members, 33.3 per cent had families with up to 4 members, while 12.5 per cent of the respondents had to maintain large families ranging from 8 to 10 members.

#### 4. Occupation of respondents' family members

The striking feature here is that only one person (0.3%) out of 288 respondents reported a family member working as an agricultural labourer. The four major occupations (housewife, industrial worker, small trader, student) constituted about 63.6 per cent of the total.

## 5. Academic qualifications of respondents' family members

Looking at the learning achievement of respondents' family members we find that 50.3 per cent of them had education up to the primary level, while 34.7 per cent received some amount of non-formal education. SSC graduates constituted 7.3 per cent of the respondents' family members and 4.5 per cent were illiterates. Only 3 people (1%) were university graduates.

## 6. Course duration of non-formal education programme

For 49.3 per cent of the respondents, their courses lasted 9 months, which is the typical duration of courses offered by around 50 per cent of the sample NGOs. However, some people stay in the programmes for up to 2 or 3 years.

## 7. Year of attending NFE courses

Sixty per cent of the respondents attended non-formal education courses during the 1995-98 period, 15.3 per cent in 1999, 14.2 per cent between 1991 and 1994, and 10.4 per cent before 1990. Most respondents (94%) fully completed the course.

## 8. Training facilities available as follow-up skills training

The data indicated that training facilities for income generation/poverty alleviation provided by NGOs varied widely. In rank order, the training facilities available for respondents were as follows: raising poultry (29.2% of the respondents), petty trade (18.8%), advisory services (16.3%), training in agriculture (12.5%), vegetable growing (10.4%), livestock rearing (6.9%), and sewing/batik/embroidery (5.2%).

In general, most respondents felt that these training programmes were useful. They were reported to be *very good* or *good* by 83 per cent and 17 per cent of the respondents respectively.

## 9. Benefits of non-formal education programmes

Among the respondents, 91 per cent said that the training programme helped them to increase their incomes. In the opinion of 87 per cent, the training programme helped increase their skills; 79 per cent felt that their awareness of education increased as a result of the training programme, while 74 per cent reported an increase in health awareness. About 65 per cent of them believed that the training programme had increased their awareness about the environment, and 47 per cent were of the opinion that their awareness about birth control had increased on account of the training programme. Only 2 per cent denied that the training programme had any benefit at all. The opinion of 9 per cent of the respondents could not be identified.

## 10. Facilities available for continuing education of NFE graduates

About 16 per cent of the respondents said that no continuing education facilities were available for them. Others reported *library facilities* (43%), *associations* (33%), *gonokendra* (community learning centres) (5%), and *study circles* (3%).

## 11. Loans received by respondents from NFE organizations

Among the respondents, 42 per cent did not receive any loans at all. The others had received loans ranging from TK 2,000 to TK 10,000 or more.

## 12. Type of local contribution for setting up NFE centres

In the opinion of 196 out of 288 respondents (68%), there was no local contribution at all. For 15 per cent of them, the local people were sufficiently motivated to donate to the centre. About 14 per cent said that the local community made the school available. Only three people (1%) stated that land was made available while another three respondents mentioned the availability of cash. Voluntary labour was reported by only 0.3% of the respondents.

## 13. Weaknesses of the NFE programme

Respondents were asked to express their opinions about the weaknesses of the innovative approaches to functional literacy programmes for poverty alleviation. The responses show that 78 per cent of the sample believed that the programme had no weaknesses, while 3.5 per cent did not respond to the question. However, 7.6 per cent noted a lack of local initiative as a weak point, followed by insufficient land for the centre (6%). A few (1.7%) observed that management was not good, while another 1.7% alleged that the programme was not attractive. Only one per cent felt that the absence of their own school building was a weakness of the programme.

## 14. Suggestions for strengthening the programme

According to the data, 47 per cent of the respondents recommended that local initiative should be increased, but 20 per cent felt that no improvements were necessary. About 15 per cent of them suggested *reading facilities/newspapers* at the centre, while 10 per cent wanted to include local elites on the management committee.

## 15. Respondents' lives before and after functional literacy training

The questionnaire elicited information regarding the lives of respondents before and after literacy training.

**Family size:** Before training, there were 45 families with 8-10 members and 160 families with 5-7 members. After training, the numbers decreased to 36 and 158 families respectively. The number of families with 4 members or less increased from 83 before training to 94 (13% increase) after training.

**Monthly income:** In regard to changes in income level, remarkable improvements took place after receiving post-literacy follow-up training. There were increases in earning power for all categories of monthly income (less than TK 1,000 to more than TK 4,000). In addition, the number of people with no income at all decreased from 70 before training to 3 after training (a 96% improvement).

**Number of working days per month:** The data indicated that almost everyone had increased the number of days they worked each month. In addition, the number of jobless people decreased from 171 before training to 47 after training (a 73% improvement).

**Possession of land:** The number of landless people decreased from 190 to 183, and the number of people with a small amount of land at their disposal increased from 40 before training to 44 after training (a 10% increase).

**Area of homestead land:** The number of people with no homestead land was reduced from 78 before training to 60 after training (a 23% improvement). Others increased the amount of homestead land in their possession.

**Housing:** Fewer people were living in clay houses after training (a decrease from 32 to 28). Similarly, the number of residents in straw dwellings declined from 82 before training to 59 afterward. However, more people were living in tin shed structures (a 16% improvement).

**Occupations before and after NFE training:** Data indicate that the number of electricians increased from 1 to 20 (a 1,900% improvement), the number of radio/TV assembly workers increased from 2 to 10 (a 400% increase), small traders increased from 10 to 15 (50%), industrial workers increased from 5 to 29 (480%), servants increased from 1 to 8 (700%) and garment workers from 6 to 19 (217%). Five people found work as welders whereas there were none before the training programme. There were 23 people working as seasonal labourers before training, and none afterward. Finally, the number of unemployed decreased from 98 before training to 19 after training (an improvement of 81%).

**Sources of drinking water:** The number of respondents using water from tube wells increased from 204 before training to 237 (a 16% increase). On the other hand, the number of people using ponds or rivers as sources of drinking water decreased significantly by 76 per cent (from 46 to 11).

**Attitude of respondents towards education for girls:** The number of respondents sending daughters to school increased from 176 before non-formal education to 190 after training (an 8% change in attitude).

**Sanitation facilities:** The use of kutchra latrines by respondents declined by 62 per cent (i.e., from 119 to 45) and pucca latrine use increased by 49 per cent (158 to 236).

**Household possessions:** Thanks to non-formal training the respondents were better able to obtain consumer items for the household such as radios, TV sets, bicycles, fans and furniture.

## B. Data on projects

In order to gather information about the progress made so far by the various functional literacy projects, the researchers administered a checklist and engaged in discussions with project personnel about the future shape of NFE programmes. The results are presented here.

### 1. Cost and sources of financing

The sample includes 16 development projects under 8 organizations. The Government of Bangladesh provides funding for 4 projects and the other 12 projects receive foreign assistance. There are local contributions to 3 of the projects. Foreign assistance and government grants constitute 72.5 and 8.8 per cent respectively of the total cost of the 16 projects. The NGOs' own contributions cover 18.6 per cent of the total project cost, with the remainder borne by government funding and foreign donations.

### 2. Financial targets and achievements

Data indicate that the actual expenditures of the projects did not always reach specified targets. For example, salaries went to 37,382 of the targeted 37,573 teachers. Thus, physical performance under the salary component was 99.49 per cent. (Details for this component of the checklist are provided in the full version of the study report, although the data are incomplete.)



### 3. Baseline surveys of area served by project

Twelve out of the sixteen projects did not undertake any baseline surveys; three of these claimed that they were the second phase of earlier projects with surveys of their own. The remaining four reported that before starting up their programmes, they had conducted baseline surveys in each village to determine the availability of learners, teachers and school buildings.

### 4. Number of literacy centres, enrollment figures, graduates and dropouts

Altogether the 16 NFE projects are responsible for 21,024 literacy centres. The number of centres for each project varies widely from 36 to 9,128. BRAC has the most literacy centres (9,128), followed by Proshika (5,722) and FIVDB (2,140).

Enrollment in the 21,024 literacy centres stands at 566,738 of whom 382,649 (67.5%) are girls. The average enrollment per centre works out to be 27. Out of 566,738 learners, 367,503 (64.8%) in 10 projects completed their courses. Data from six projects were not available. The dropout rate for girls was 2.8 per cent. Dropout data from seven projects were not available. The dropout rate for each project varied from 1.3 per cent (BACE) to 14.7 per cent (Proshika).

### 5. Local contributions to literacy centres

Respondents were asked to mention the nature of contributions made by local people in establishing literacy centres. In six out of sixteen projects local people had provided land for the literacy centres. For four of the projects, the local school was available for literacy centre activities; equipment, voluntary labour and cash were forthcoming at three of DAM's projects, while voluntary labour was available in the case of FIVDB and SB projects as well.

### 6. Education costs per learner

The cost of the NFE programmes per learner unit varied from TK 7,311 to TK 349, with the highest unit costs reported by programmes with a technical component.

### 7. Basic qualifications for admission

Most of the NFE centres admit illiterates, dropouts, or working young people between the ages of 8 and 14 years. Some programmes offering trade or technical skills require completion of primary school.

### 8. Continuing education facilities available for learners after completing the literacy programme

Nine projects make library facilities available for neo-literates, while several of them (DAM, SB, CMES, UCEP) arrange either *special classes* or offer some sort of vocational education.

### 9. Performance on classroom tests

Data indicate that about 76.5 per cent of the learners obtained marks of 60 per cent or above in class performance tests, 18.5 per cent scored 45 per cent or above, and only 4.7 per cent received C grades or below (30%).

## 10. Teachers and their qualifications

There were 28,946 teachers reported for 19,836 literacy centres and 17,885 (61.8%) of these teachers were women. Data indicate that only 7,487 (25.9%) had completed secondary school and 455 (1.6%) were graduates of teacher training institutes.

## 11. Basic training and refresher training programmes

The duration of the basic training programmes for NFE teachers offered by the projects varies from 6 to 240 days. Refresher training programmes last from 2 days to 54 days (in the case of 2 of the projects).

## 12. Centre management committees and their meetings

Fourteen of the projects have centre management committees. These committees have from five to seven members. Thirteen of the projects have women on their committees. Their representation ranges from one to five members. One of the Dhaka Ahsania Mission (DAM) projects has all women on its committee.

Eleven of the management committees held meetings in 1999, sometimes once a month. Average attendance rates ranged from 80 to 95 per cent.

## 13. Funding for operation of the centres on completion of the project

Data indicate that only six out of sixteen projects suggested that centres raise subscriptions from their members. Six other projects advocated local donations and NGO support. Two observed that the issue would depend on policy decisions at the national level. Information from the remaining project authorities was not available.

## 14. Expansion of the programme in the future

Opinions varied in this respect. Only five projects felt confident about extending and expanding their programmes, although in some cases only in certain geographic areas. The other projects either claimed that government and donor support was essential or else were silent about the matter.



## 15. Loans available for learners under the project

Only six of the sixteen projects had loans available for their learners. For one project, certain categories of learners were eligible for loans from the Rural Development Programme (RDP).

## 16. Types of support other than credit provided to learners for poverty alleviation

Advisory services were available for 12 projects while training facilities were provided under 13 projects. Three projects offered support for getting jobs and loans from other NGOs.

## 17. Responses to the project

The majority of the project authorities expressed satisfaction over project implementation. Three of the NGOs had little doubt about the sustainability of their projects.

However, five NGOs expressed concern that local financing of operating costs would not be feasible as people in the project areas were very poor. Four NGOs remarked that the projects would need outside financial assistance for smooth implementation.

## 18. Sustainability

Some project authorities were not clear about the sustainability of their projects. Five projects did not answer this question. Other projects believed that sustainability depended on funding from Government or international agencies (ILO, UNICEF). Still others were willing to turn everything over to local communities or attempt to increase local contributions and income generating activities to make the programmes sustainable.

## 19. Extent of sustainability achieved

Out of sixteen projects, five left the question unanswered, and five others stated that their programmes were not yet evaluated. Authorities for the remaining projects indicated that external financing was needed to ensure sustainability. One project, the Bangladesh Rural Advancement Committee, noted that many organizations within Bangladesh and even some African countries have adopted its programme model. Even so, financing by government or external agencies was inevitable.

## III. Discussion

### *Programme impact*

This study found that after experiencing literacy training the lives of the learners improved both economically and socially. The literacy training programme had a positive impact on clients in the sense that it helped increase their 1) incomes, 2) skills, 3) awareness of education, 4) awareness of health issues, 5) awareness of the environment, and 6) awareness of the importance of birth control. Project authorities were unanimous in asserting that their programmes contributed to the overall development of the locality.

### *Cost, quality and effectiveness of the programmes*

Per learner education costs varied widely because of differences in the programmes offered. In general, programmes emphasizing technical skills and vocational education courses have high per capita costs.

The results of classroom performance tests indicated that about 77 per cent of the learners were able to obtain marks of 60 out of 100 or above. This is an indication of good performance. These results, plus the evidence that the majority of NFE graduates have been able to improve their economic and social circumstances, indicate that the NFE programmes seem to have been effective.

### *Replicability*

Out of 16 projects observed in the study, 6 projects are very small (i.e., the number of centres for each of these projects is less than 100). Because small is always beautiful it is not possible to predict the nationwide replicability of these projects in terms of administration and management, although the programmes in all cases appear to be of good quality.

### *Sustainability*

Data indicate that 81.3 per cent of the costs of the projects is financed out of grants from the Government and from donors. To ensure sustainability of the projects it is necessary that operational costs be borne by the local community or beneficiaries. Because the beneficiaries are mostly poor, in spite of their best intentions they are not in a position to contribute to the sustainability of such programmes; and at best they can give only a token amount. The lion's share of the programme cost has to come from outside the community to ensure that the programmes last. In view of the substantial financial requirements for the operation of NFE projects, the majority of the project authorities feel that the sustainability of these projects will depend upon the availability of funds from outside sources.

## Conclusions

1. It appears that all of the NGOs participating in the study provided varying degrees of continuing education. The majority of them offered innovative skill training/income generating programmes for their clients.
2. Their programmes complemented the national-level programme for the achievement of EFA and the alleviation of poverty.
3. The programmes were commendable and yielded good results in respect to community development, raising awareness and raising incomes, leading to a process of poverty alleviation.

## Recommendations

1. Programmes of this nature should continue and be promoted to make the learning centres focal points for community development.
2. Technical and material support from outside should, in any case, continue for maintaining and sustaining the programmes.
3. Because beneficiaries under the programmes are too poor to bear the financial burden for continuing them, the involvement of relatively more well-to-do classes in society appears to be necessary.



# Innovative Approaches to Functional Education for Poverty Alleviation in China

## I. Introduction

It is widely recognized that poverty and illiteracy are intrinsically interrelated, and that education is one of the most efficient ways to empower the poor. In the past decades, China has made great efforts to reduce poverty through education. But as a country with the largest population in the world and limited educational expenditures, China still lags behind in the pursuit of universal literacy.

This study intends to show the basic situation of poverty alleviation through education in China, with a focus on innovative approaches adopted by the Chinese people.

## II. Understanding Basic Concepts in the Chinese Social Context

### *Education and learning*

Historically, *education*, for most of the population in China, took place through *social cultivation*. Family, community and the whole society played important roles in educating the masses. The school, as a specialized agency for education, was available only for a small number of people and just in recent centuries.

Currently, the broad sense of education includes both formal schooling and the non-formal learning forms. With the widespread popularity of notions such as *lifelong education*, *education for all* and *the learning society*, the value of non-formal learning has been reemphasized in China.

### *Literacy and literacy education*

Literacy is the ability of a person to do basic reading, writing and calculating. Literacy education is designed to train those who lack these skills. In the early 1950s, the Government issued an official standard for the minimum literacy level. According to this standard, a farmer needed to recognize at least 1,000 Chinese characters, while employers in enterprises and institutions, and residents of townships and cities had to master 1,500 characters. The *Regulations on Wiping Out Illiteracy* issued by the State Council in 1988 raised the standard to 1,500 characters for farmers and 2,000 for residents in urban areas. In addition, everyone should be able to complete easy-reading articles, do basic accounts and write notes.

Although the standard has changed with the passage of time, the focus has remained on whether individuals have mastered enough Chinese characters and have basic skills in reading, writing and calculating. The evaluation of literacy is mainly through testing. But testing cannot show whether literate people have really got the knowledge and skills needed in daily productive activities, or whether the learned knowledge is effective in poverty alleviation and life improvement. Therefore, a new concept of *functional literacy* has been put forward.

## *Functional literacy /education and poverty alleviation*

- ▶ Functional illiteracy: unable to participate in any reading-writing-skill-requiring activities organized by one's social group or by the community
- ▶ Functional literacy: able to participate in any reading-writing-skill-requiring activities organized by one's social group or by the community

*Recommendations for the Revision of International Standardization of Educational Statistics, UNESCO 1978.*

The new concept of literacy is no longer limited to reading and writing a certain number of characters. The effectiveness of using literacy – using the knowledge, skills and beliefs that literacy learning brings – to solve practical problems in everyday living, to adapt to society and to improve the quality of life becomes more important.

Functional literacy, as a new concept and idea, has strongly challenged the traditional way of literacy education and has brought great changes in both school education and non-formal adult education.

Functional literacy and education emphasize the all-round development of basic skills and the effective use of these skills in individual development and societal improvement. The objective of functional literacy and education is to conduct training for people who will undertake various social and economic tasks in order to reach the goal of reducing poverty and improving the quality of life.

The concept of *poverty* is complicated, for people measure it in different ways. Thus absolute poverty seems to refer to the inability of an individual or a family to maintain minimum living conditions, while relative poverty seems to refer to a living condition below the average that just barely satisfies basic needs.

Market reforms dating from the late 1970s brought rapid economic growth and the decline in the number of people in China living in absolute poverty. World Bank estimates indicate that the number of people living in poverty in Mainland China decreased from 398.3 million in 1985 to 269.3 million in 1995, and the poverty gap rate fell from 10.9 to 7 per cent during the same period. But as a developing country with the largest population, China still has poor citizens concentrated in resource-constrained remote areas and poverty alleviation is still a crucial issue on the development agenda.

### **III. Functional Literacy/Education and Poverty Alleviation in Practice**

The current tendency worldwide is to increase the functions of both literacy education for adults and regular school education for youngsters. Because more difficulties and problems exist in adult non-formal education, especially for illiterates and semi-illiterates, the study will focus on this issue.

#### *Who are they? A profile of illiterates and semi-illiterates*

According to the results of a population survey in 1997, the illiterate and semi-illiterate population in China age 15 and over constituted 15.8 per cent of this age group. There exist huge gaps in different regions, amongst both sexes and various nationalities. The survey showed that the illiterate and semi-illiterate population in rural areas was 21.2 per cent, 12.9 per cent higher than in urban areas. The female illiteracy



and semi-illiteracy rate was 22.6 per cent, which is 13.6 per cent higher than amongst males.<sup>3</sup> The population of ethnic minorities in China is less than 10 per cent, but more than 40 per cent of the population living in poverty consists of minorities. During the 1990s, primary school enrollment reached 95 per cent in Mainland China. This means that most young adults, including illiterates and semi-illiterates, have attended school for a certain period of time when they were very young. According to a 1993 survey of young adult illiterates in ten provinces, more than two thirds of them have been in school.<sup>4</sup>

#### The basic characteristics of illiterates and semi-illiterates in China:

- ▶ More in rural areas: 85 per cent of the illiterate population live outside cities.
- ▶ More female: 70 per cent of illiterates are women.
- ▶ More minorities: ethnic minorities are less than 10 per cent of the whole population, but constitute 40 per cent of illiterates.
- ▶ More elders: the older in age, the higher the illiteracy rate.
- ▶ More primary school dropouts: over 71 per cent of young adult illiterates have been to primary school, but dropped out before graduating.

### *What do they want?*

#### *Needs analysis of the learners and the relevance of learning content*

Because literacy education is provided mainly for illiterate and semi-illiterate adults in non-formal training settings, the differences between these adult learners and school-age children in regular schools are considerable.

*"I have been to school for several years, but did not finish elementary school. I was not a good student and did not like the school life. About my literacy level, oh....., I can read my family records (genealogy), one of my uncles taught me to do that when I was very young, because I was the only boy at that time in the whole family, and to do some basic accounting. What do I like to learn, oh....., Now I'm in an evening class learning how to grow herbs. I like the learning and enjoy trying to grow new plants."*

Quoted from a nineteen-year-old man in a mountain village in Guizhou Province.

Most adult learners have clear goals to achieve as a result of their studies. These goals are usually related to their practical needs. They may serve as both motivations for and barriers to learning. How to make these goals positive in the learning process in order to lead learners to a higher stage of satisfaction is a crucial issue in functional literacy education for adults. In the above example, when the young man was in the formal school system, he was required to learn basic book knowledge. He was not a successful student in school and consequently dropped out. His literacy needs were restricted to reading family records and doing basic accounting, skills he learned from his uncle (non-formal learning). He attended the evening class as an adult learner. He chose to do so and enjoyed learning. Several interesting points emerge from the analysis of this young man's educational experiences:

<sup>3</sup> China Population Statistics Yearbook 1999, China Statistics Publishing House, 1999, p. 36.

<sup>4</sup> Yu Bo and Xie Guodong, Literacy Education In China, North-East Forestry University Press, 1998, p.19.

- ▶ Schooling is not the only way for education. Learning may happen at any place and at any age. For children, unconscious learning is important, and for adults personal choice and meaningfulness are major factors.
- ▶ People, especially adults, have their own judgment of the value of education. For many of them, the most memorable and valuable learning may not happen in school, but in other situations. Well-planned, various non-formal educational activities are the major channels for them to enrich their learning experience.
- ▶ Well-planned learning activities and individual choice sound contradictory, but compose the two parts of one issue that leads to the effectiveness of learning. They are not something to be omitted, but have to be combined.
- ▶ Relevance of the learning content to the practical needs and the everyday lives of learners is one of the most important factors in adult learning. Functional literacy should be geared to the empowerment of learners.
- ▶ Adult learners have accumulated rich experiences and will bring these experiences to bear in their further studies. These are the motivational factors and the valuable resources in functional literacy education.

### *What we have done: innovative approaches*

The innovative approaches of functional literacy/education for poverty alleviation have a solid foundation in socio-economic conditions currently prevailing in China. Generally speaking, the following factors have led to their development:

- ▶ Practical needs arising from the transition of a planned economy to a market economy
- ▶ Changes in government policy, particularly in regard to education
- ▶ The realities of rural life and the increasing regional gaps in development
- ▶ The failure of the traditional literacy education forms and the unsatisfactory situation of basic education

Two projects serve as recent examples of innovative approaches in functional education for poverty alleviation in China.

## 1. Prospering Villages through Sciences and Education

<b>Basic aim:</b>	developing villages through sciences and education
<b>Target groups:</b>	farmers in rural areas, particular in poverty
<b>Starting year:</b>	planning started in 1995 and piloting began in 1996
<b>Size:</b>	1,251 villages from 22 provinces
<b>Beneficiaries:</b>	250 thousand households, 1 million people; economic increase of 1.5 billion Yuan

In 1995, the project *Prospering Villages through Sciences and Education* was initiated by the China Association of Agriculture. After many specialists had carefully investigated agricultural production and the practical lives of local farmers, pilot sites were established in 1996. The basic goal of the project was to apply science and education to the development of rural areas in order to alleviate poverty and improve the quality of life.



By the year 1999, over 1,251 villages in 22 provinces or autonomous regions had been involved in the project in various ways. Amongst these, 191 villages from 21 townships were on the national piloting list. Up to now, over 1 million farmers from 250 thousand households have directly benefited from the project; an economic increase of over 1.5 billion Yuan has accumulated as a result of the project.

From 1996 to 1999, over 2,400 educators and scientific experts had participated in the project. Thirty per cent of the experts in agriculture stayed in villages for quite a long time to advise farmers about agricultural innovations. One hundred training schools of agricultural science and technology have been set up and over 1.5 million farmers have received training at these institutions. It is estimated that the increase in income per person through the project is 100-500 Yuan per year.

### *Case Study 1: The project in Chaichang Village, Hebei Province<sup>5</sup>*

Chaichang Village is located on Taihang Mountain in Hebei Province. It has 303 households and 1,140 residents. Only 1,000 Wu out of a total of over 16,700 are cultivated and good for grain farming. In 1995, before the project started, the annual income per person in the village was 1,085 Yuan. Starting in 1996, Chaichang Village was selected as a pilot site for the project. The China Association of Agriculture, Hebei Agriculture University and the government of Yi County worked together with the village farmers to come up with an overall development plan for fruit-tree planting, grain production and animal husbandry. Professors of Hebei Agriculture University and other specialists came to the village with new grain seed, fruit-tree samples, and advanced skills and technologies in farming. Evening classes were set up for the adults to learn new farming and husbandry skills.

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<sup>5</sup> Proceedings of the Fifth National Conference on the Pilot Experiences of the Project *Prospering Villages through Sciences and Education*, ed. by China Association of Agriculture. China Agriculture Press, 2000.

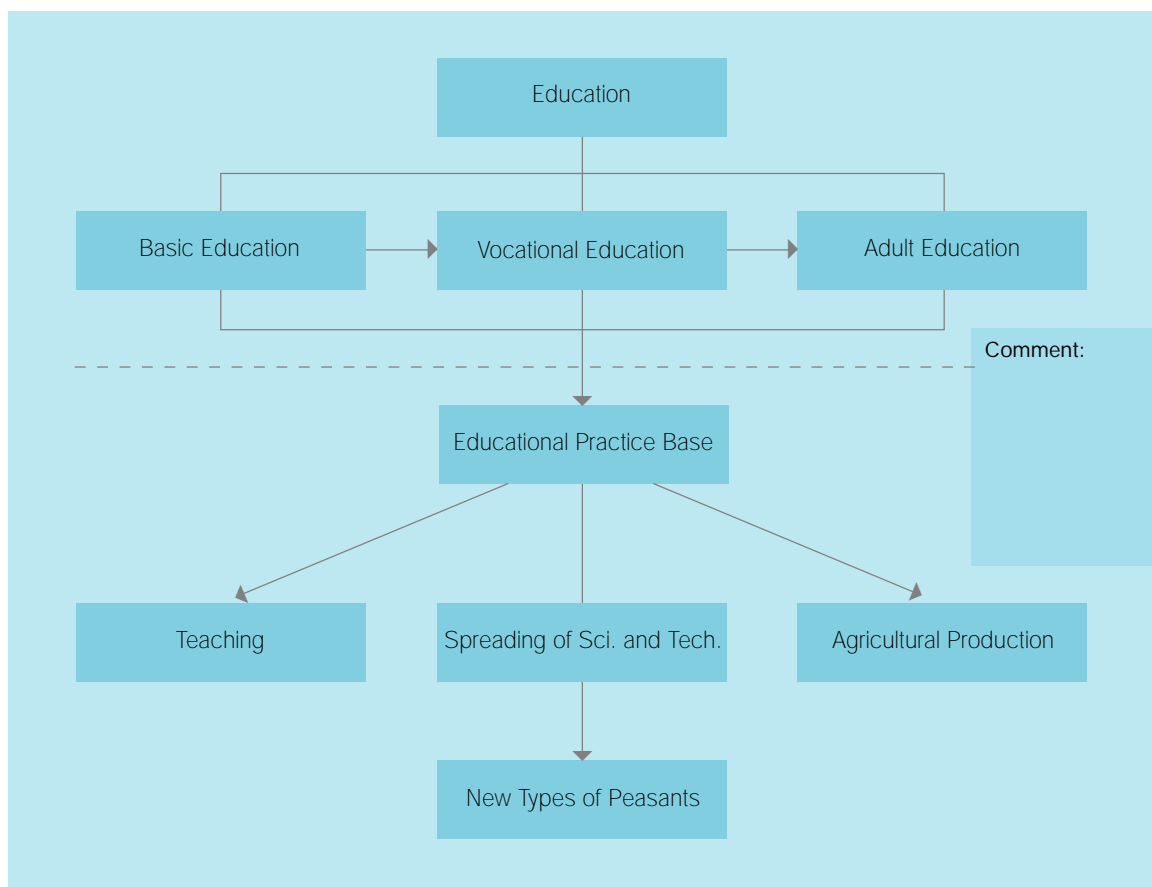
Regular school students also had chances to pick up knowledge and skills in agriculture. The villagers applied these in their everyday farming. As a result, by 1998, the annual income per person in the village was 3,300 Yuan, almost two times greater than in 1996. Eighty per cent of households bought color TVs and built new houses. Over 5,000 metres of good quality road were constructed with the collective funds of the village. Daily public bus service now connects the village to the county seat, provincial capital and even to Beijing. The living conditions of the villagers have been greatly improved.

The following innovative practices taking place during this project in Chaichang Village are worthy of emulation:

- Village based developmental planning required a deep understanding of the village, including special characteristics related to its geography, ecology, sociology and agricultural products. Strong wills and efficient administrative mechanisms were also vital for the planning process. These requirements were based on joint co-operation between policy makers, administrators at different levels, specialists in both planning and agriculture, and the villagers themselves. The overall development and training plan for Chaichang Village was the ideal outcome of the joint effort of these people.
- Chaichang, as a village in a mountainous area, has both the strengths and constraints for development. The overall development strategy worked out by the planning committee, which started with greenhouse vegetables followed by fruit trees, along with steady improvement in grain cultivation and animal husbandry, was well suited for local environmental conditions and brought prosperity to the village.
- Human power is the crucial issue in any development project. In Chaichang Village, various training programmes were set up to meet the needs of different learners in the village. The evening classes for adults combined literacy education with skill training; the farmers' technical school provided middle level training programmes in farming, fruit tree planting and animal husbandry. The regular school added practical knowledge in agriculture. The network of education included almost everyone in the village and created an effective environment for learning.

### *Case Study 2: The functional education system in Gaichazui Village*

Gaichazui Village is located in a hilly region of Shansi Province. It was one of the most backward areas in the province. Since the trial run of the project *Prospering Villages through Sciences and Education* started in 1997, there have been great changes. The key point here is to develop functional education. *Two Combines* worked as the major strategy, which meant the combination of basic, vocational and adult education, along with the combination of teaching, the spread of science and technology, and agricultural production. The functional education system in Gaichazui Village works as shown in the following chart.



## 2. Non-formal education for adult women

Non-formal education has played an important role in women's education in China. More than 70 per cent of the illiterates and semi-illiterates are women. As the gender gap in literacy grows larger, non-formal education becomes even more important for women.

*"I have been in literacy classes several times. We are required to be there in wintertime and it is fun to be with other villagers in our spare time. Have I passed the test? Of course. We all passed it. Can I read this literacy textbook? No, I cannot. Why read it after the test?"*

From an interview with a middle-aged woman in Sichuan Province

What this woman said shows the failure of traditional literacy education. Literacy education focused on just reading and writing and measured by test taking is not effective for many adult women. Innovations are needed in this field.

After a survey in Shaansi Province, researchers found that for women who had attended school in rural areas, the recorded educational achievement from their schooling was higher than their actual functioning abilities as indicated in reading directions or technical manuals, or calculating production costs. This means that even for women who have been to school, even those who have completed elementary school, practical skill training is still necessary.

The aim of women's literacy education is not just to make them read and write, but to empower them for the future. This empowerment may come from different activities and be related to a much larger environment.

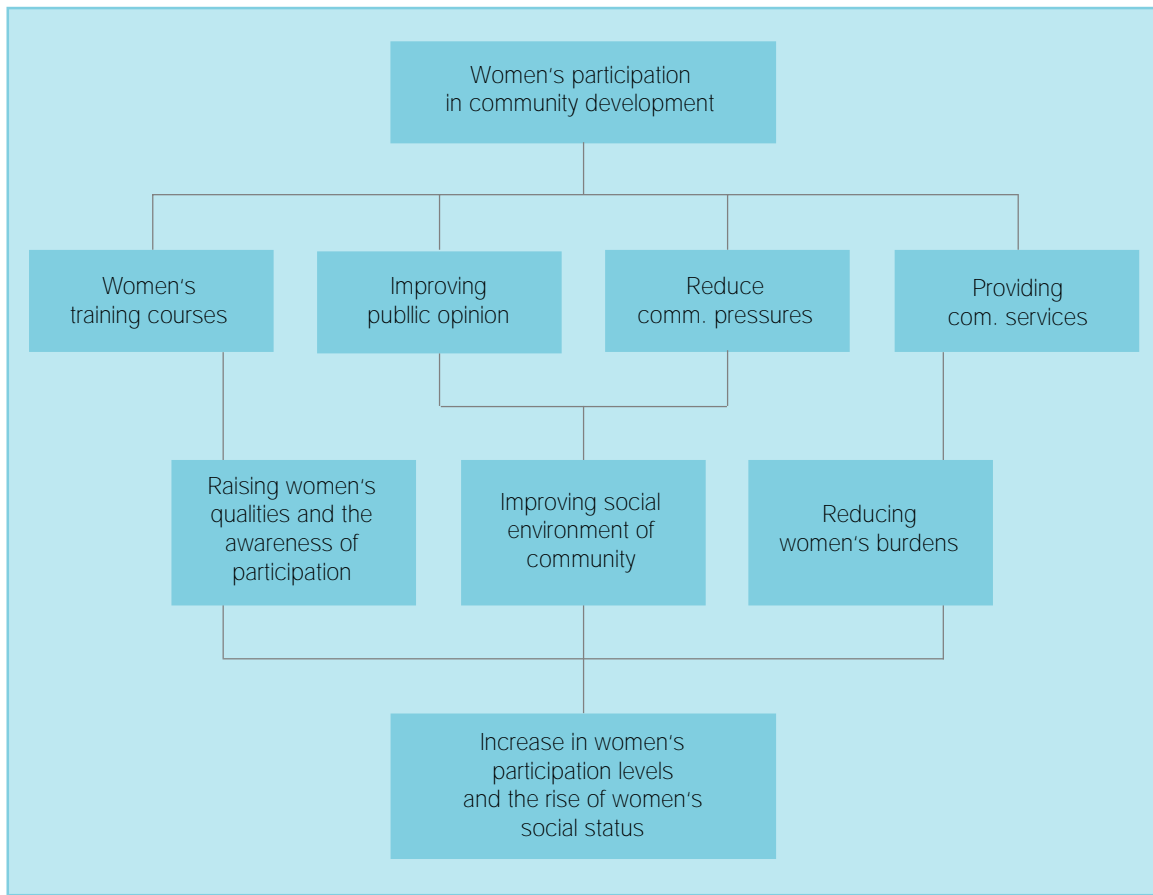
### *Case Study 3: Participatory training workshop for women*

A workshop for training women to use small loans was to be initiated in a mountain village of Hebei Province. The head of the township women's federation and two volunteer women social workers came to the village to do background investigation. They talked to many women in the village and listened carefully to what they said. The training content and schedule resulting from this bottom-up investigation had four major parts: literacy learning, skills training, basic life strategies and protection of women's rights. Women were organized in groups. Learning activities were based on their own experiences. A flexible work schedule fit in with the women's own management of time. Participatory methods were widely used in the learning process. Women were no longer passive listeners during the learning process. They actively participated in identifying problems, making plans, collective teaching and learning, and sharing experiences. The workshop ended with great achievements. One result was that many women decided to be in group-learning activities themselves in the future. They not only used the loans they received, but also the knowledge, skills and ideas that they learned from the workshop.

Education in rural areas, especially for adult women, is a process of social development. It is a task for the whole community. Education is the most efficient way to empower women. Developing women's education in rural areas should be an indispensable part of the rural development strategy. The following is a basic framework designed by researchers in Shaansi Province in a project devoted to increasing women's education levels and raising women's social status as a whole.







#### IV. Conclusion

For decades China has explored efficient ways to alleviate poverty through education, especially in rural areas. Generally speaking, there are two major efforts coming from two different directions. One is from the agricultural sector and the other from education. There are different emphases, but both share the same concerns: to increase the contributions of science and education to rural development, and to improve the quality of rural life. Several nation-wide projects are under way in order to reach these goals.

The project *Prospering Villages through Sciences and Education*, which started in 1996, is still continuing on a large scale. From 2000 to 2005, it will expand to serve 100 counties, 2,000 townships and 30,000 villages. By the year 2010, the project will be flourishing in 100,000 villages all over the country. The contribution of science to the economic development of the villages will increase, as will the incomes of villagers. The project will also provide each village with at least five specialists in science and technology, with either secondary or tertiary education. The village-level administrators should be trained in secondary specialized schools.

Parallel with this project, another programme called *Green Certification* got under way. It takes place in the school environment, focusing on secondary agricultural skill training. After this training, secondary school graduates may get two certificates: one related to academic achievement, and a *green certificate* indicating that the holder has received training in agricultural production skills.



We have learned the following lessons from these projects:

- ▶ Poverty alleviation is not just a matter of income increase or economic development. It is quality raising and capacity building. Thus education plays an important role in the process of poverty alleviation.
- ▶ Education geared to poverty alleviation cannot limit itself to the school environment and must extend its boundaries. School education should be integrated with non-formal ways of learning and combine regular book learning with practical skill training.
- ▶ The holistic development of learners and their local community requires the creation of public awareness and the mobilization of all available resources. Specific learning needs assessment; locally relevant teaching-learning materials development and learner-centered methodologies should all be put into practice.



## Six Projects from Rural India

# Non-Formal Education for Sustainable Development

## I. Introduction

The Indian Institute of Education (IIE), Pune, India, which is one of the ten member institutes of the APPEAL Research and Training Consortium (ARTC), has undertaken an investigation of projects in India that emphasize innovative approaches to non-formal education for sustainable development. These projects focus on disadvantaged members of rural society (women, tribal minorities, lower castes) and (in addition to local empowerment) address literacy and primary education, vocational education, health education, improvement of the environment, and the decentralization of financial and administrative powers to local levels.

The IIE has been engaged over the last quarter of a century in experimenting with innovative ideas for the spread of literacy and primary education through formal and non-formal modes and for the empowerment of rural women and other oppressed people. Its model of non-formal primary education (called PROPEL or Promotion of Primary and Elementary Education) has been used in other parts of the country. The model is considered an appropriate replicable alternative for bringing primary education within the reach of all children with due regard to community lifestyles and people's expectations. Two other IIE projects, the Vigyan Ashram and the Centre for Education and Development of Rural Women, have been widely acclaimed and are also covered by this survey. The former project provides vocational education on the principle of



*learning while working* and the latter is an action research project for the education and development of rural women with a view to empowering them to become agents of rural reconstruction.

India is a vast country and there are many projects in rural areas oriented toward improving both formal and non-formal education. However, there are three in particular that deserve special attention because of their focus on previously unserved or underserved populations:

1. Lok Jumbish and its programmes for literacy, education and the empowerment of rural women in Rajasthan
2. The Integrated Abujhmarh Tribal Development Project undertaken by the Ramakrishna Mission for the development of tribal people in Madhya Pradesh
3. Agragamee and its rural education programmes for the tribal people of Orissa

The survey of these six programmes was conducted by an IIE research team under the leadership of its Director General, Dr. S.K. Gandhe. Outside agencies provided assistance in the case of two of the projects (Abujhmarh and Agragamee) The research team obtained data from available documents and supplemented their interviews of students and staff with first-hand observation of project activities.

Full details of these projects and their programmes, as well as information about a seventh project (Rashtriya Seva Samiti, Andhra Pradesh) not included here for reasons of space, are found in the full version of the study report submitted to APPEAL, UNESCO Bangkok.

## II. The PROPEL Project (Promotion of Primary and Elementary Education)

IIE believes that education and development are closely interrelated and that the people at the grassroots level are the makers of development while government agencies are merely facilitators. The PROPEL project assumes that *Education for All* can best be organized through community mobilization.

PROPEL has evolved through three phases with an emphasis on action research and the mobilization of rural communities for educational development. During Phase I of the project (1979-1985), nearly 4,500 children from 110 villages in different agro-climatic zones were reached under the non-formal education programme involving local leadership and communities. For this purpose 263 NFE centres were established. Phase II (1985-1988) covered 669 children in 40 NFE centres at 35 newly selected villages in poor, drought-prone and hilly areas. Emphasis in this phase was on testing measures for community involvement by strengthening village education committees as local motivators and managers of primary education. In the third phase, there have been attempts to develop a replicable planning and development model to facilitate training programmes in community-level planning for education that can be set up by voluntary agencies and government officials. During this phase more than 5,500 out-of-school children were brought into the stream of primary education through 178 NFE centres and learning camps. Emphasis has been on reaching girls, the largest group excluded from schooling because of the household division of labour and deep-rooted social prejudices.

Currently, PROPEL serves a population of 120,000 living in approximately 18,000 households scattered over 4 *blocks* or sub-districts in Maharashtra State southeast of the city of Pune.

### *Basic philosophy*

PROPEL believes in teamwork, good governance, and responding to local needs. It has encouraged micro-planning, thus passing responsibility for the project operation to people at the grassroots level. It acts as a catalyst and attempts to support community ownership of the project. Collaboration and participation of the villagers are prerequisites for all activities.



From the very beginning local community members are made aware of education problems in their community and participate in surveys of specific educational needs and facilities available. After the surveys have been analyzed and the community decides to take action, a village education committee is activated to help project staff set up an NFE centre, organize classes, and mobilize the community to serve the educational cause.

The village education committees (VECs) have been the chief vehicle ensuring community participation in the PROPEL project. Since 1992 these VECs have received legal sanction as well as political and administrative support. VECs are established by consensus at village council meetings and are expected to play a major role in convincing parents to place their out-of-school children in NFE centres.

### *Curriculum and materials*

The NFE community centre and its curriculum are the heart of the project's programmes in non-formal education. The curriculum espoused by PROPEL attempts to cover the basic content of the first four grades of the formal primary school curriculum. In addition, the curriculum emphasizes skills needed for everyday life in the community rather than securing entrance to further education. Local relevance is imperative as far as curriculum content is concerned, as all non-formal learners are poor, and most are older than children who attend formal schools. Curriculum content is designed to further the following ideals:

1. All children should become cultured, educated and self-respecting citizens.
2. Children's scientific temper should be nurtured.
3. The habit of self-learning should be encouraged.
4. The poverty in which children live should be countered by enabling them to organize their work systematically and learn new skills.
5. Children should become aware of the social conditions around them as well as the need for social change.

The PROPEL project's NFE curriculum proposed in the 1990s includes such subjects as language studies, mathematics, general and developmental knowledge, science, aesthetics, social skills, and physical fitness and relaxation. In particular, it emphasizes opportunities for girls to express themselves freely in speech, drawing, singing, drama, and other activities that help them to become socially competent, culturally creative citizens.

Unlike the formal system of education, PROPEL emphasizes locally relevant learning materials. The staff have regularly consulted local communities as well as specialists (linguists and psychologists) regarding the content and language of primers and readers. Many NFE materials are designed for self-learning and peer tutoring. Consequently, the materials have proven quite useful and efficient in the hands of semi-professional teachers. Materials belong to an NFE class, and are collectively shared by all students, which keeps the costs down. All materials are meant to improve literacy skills, as well as disseminate useful and practical information for everyday life.

### *Student evaluation*

One noteworthy innovation in the NFE programme is the absence of formal examinations. Evaluation of learning is based on the NFE teacher's daily diaries and students' continuous self-evaluation as well as testing of learning by peers during the students' group work activities. Self-testing is made possible by the preparation of graded evaluation materials, particularly in literacy (language) and arithmetic. Students are also encouraged to demonstrate their learning achievements daily to family members and periodically to the rest of the community. Particularly useful for public demonstrations of achievement are the community meetings during which the students can give speeches and thus show off what they have learned.

In addition, there are the biannual *bal jattras* (children's fairs). These events, which take place in a centrally located village, provide opportunities for singing, storytelling and games, and are thus settings for both recreation and informal evaluation of children's accomplishments. Students display their skills in the **three Rs** and are evaluated with simple test materials by teachers other than their own. The rationale for this innovation was the assumption that tests administered in the class would be neither useful nor relevant, because teachers might be tempted to pass all students to show good results, and the students might be constrained to copy one another's answers. This is what often happens in formal schooling due to the anxiety of both teachers and students.

However, to continue studies in the formal school, NFE students may take the formal Grade III or IV examinations. Several former non-formal education students have been admitted to formal schools. Achievement tests show that the competence of these students in many subjects is on par with, if not better than, the competence of formal education students.

### *Conclusion*

The PROPEL project has achieved some goals that clearly indicate changes in the social life of the project area. Over 90 out of 137 project villages had reached the goal of universal primary education by the year 1995. This means that in these communities all children of school-going age are either learning in formal schools, attending NFE centres or in some rare cases studying on their own and receiving systematic coaching from volunteers, teachers or family members. A great majority of the children in the area attend formal schools. This shows that the project has been able to raise awareness of the importance of basic education. Simultaneously, formal schools in the area have become more relevant to students' needs, and thus also more attractive to them.

PROPEL has reached children, especially girls, who would otherwise never have had the chance to learn. Moreover, it has shown that more lively, participatory teaching and community awareness of the importance



of education can stem the tide of dropouts and increase the quality of education, bringing universal elementary education a step closer.

What PROPEL has demonstrated so far is that in the matter of Education for All, breaking the barriers of educational orthodoxy is a tough task, but it can be tackled successfully if communities are mobilized and helped to determine their own educational and developmental destiny.

### III. The Centre for Education and Development of Rural Women (CEDRW)

In 1993, IIE's priorities – action research, social and economic development, improvement of the status of women – led to the establishment of the Centre for Education and Development of Rural Women (CEDRW) in the village of Shivapur about 25 kilometres southeast of Pune in Maharashtra State. The centre not only focuses on education and empowerment of rural women and girls, but also attempts to make them both participants in development as well as subjects of development.

A significant feature of the projects undertaken here is that they adopt an ethnological research approach combining the ideas of Paulo Freire on education and Gandhian principles of education for the rural masses. Freire argued that oppressed people had to reflect on their existing social condition and subsequently take action to bring about required changes. The Gandhian principles urge modification of the Anglo-Saxon model of education to include more participation by learners themselves.

The CEDRW is at present engaged in the operation of various activities, such as women's savings and credit groups, vocational programmes for dropout girls and for women 15-45 years of age, camps promoting health, nutrition and personality development, and the training of local farmers and artisans through *farmers clubs*.

#### *The Centre*

The CEDRW, which became functional in 1994, occupies one hectare of land outside the village of Shivapur. The infrastructure is simple and designed to harmonize with the rural setting. It consists of a workshop, administrative office, lecture-cum-dining hall, agro-exhibition hall and a preschool or child recreation centre. Apart from this, hostel facilities for 40 trainees, two self-contained guestrooms for visiting faculty, quarters for two academic staff and a residence for support staff are available.

From the total land allotted, one third is for the building and the remainder is used for a tree plantation and as experimental plots for various kinds of horticulture, including the cultivation of flowers, vegetables and medicinal plants.

#### *Objectives*

The Centre has the following objectives:

1. To develop a new system of rural education that will empower women to become agents of rural transformation
2. To evolve integrated activities for
  - ▶ women's personal development
  - ▶ women's educational development

- ▶ community development
- ▶ overall socio-economic change in the villages for sustainable development

### *Assumptions*

1. Education that goes beyond schooling has a major role to play in the process of development. This education, which is a lifelong process, is required to preserve human dignity and stimulate creativity among individuals.
2. The process of development must be given a holistic perspective and hence the community as a whole must be involved in this process.
3. Women's development cannot be considered in isolation from the development of men.

### *Mode of participation*

During informal meetings and discussions, community members initially identify the local problems faced by the community. The identified problems are prioritized according to the needs of the community. Subsequently, local representatives or *animators* are chosen from the community in order to establish linkages between the institute and the community. With the assistance of the animators and the community, and in consultation with the research team, an intervention or strategy is selected to tackle the problems. After implementation, the community itself evaluates the intervention on the basis of its success.

### *Projects undertaken*

The following are the major projects undertaken and conducted by the CEDRW.

#### *Vocational education programme*

The CEDRW, in response to the demand from many villagers, developed a vocational education programme for school dropout girls and women aged 15 to 45 years. The programme was introduced in 1997 and is presently being conducted at the Centre with assistance from the Department of Education of the Ministry of Human Resource Development, Government of India. The minimum qualification for the course is literacy and numeracy skills equivalent to Grade 3. At present, 34 students are attending the course, which lasts 6 months.

The course focuses on developing skills related to sewing, tailoring, embroidery, hand and machine knitting, and the preparation of items such as bags, purses and coverlets. In addition, there are lectures and discussions on topics related to social legislation, women's rights, work ethics, budget and accounts maintenance, marketing skills (communication), personal health and hygiene, family education, environmental health and labour law.

#### *Self-help (savings and credit) groups*

Another major achievement of the CEDRW is the formation of savings and credit groups for women, which have now spread to 17 villages. The success of these groups has led to the formation of a consortium, where two members, the chairman and treasurer of each group, meet occasionally to review the work and provide guidance to the others. It is interesting to note that the success of the women's groups has motivated the men to form their own.



### *Health education camps*

These camps were arranged especially for women who experience health problems. Simultaneously, there were attempts to make the community aware of the requirements of basic personal as well as environmental health and hygiene. For this purpose, doctors at the Primary Health Centre as well as private physicians offered their assistance. Later on, the villagers themselves requested information related to vision and oral hygiene, areas that posed special problems in the village. Village women, who volunteered and worked in teams, were responsible for convening the health education camp for these topics.

### *Child Recreation Centre*

In 1997 the CEDRW set up this centre to show that the parents and the community play a major role in the integrated development of children during the pre-school stage. In addition to preschool activities for young children (i.e., storytelling, games), the Centre also has a training programme for rural women to serve as preschool staff members. Parents are actively involved through regular parent meetings.

### *Farmers club*

This club, established by villagers in Shivapur and nearby communities, arranges meetings with visiting experts in order to keep up with advances in agricultural technology, especially as related to the cultivation of rice, a major crop in the area.

### *Conclusion*

The activities described above and their results show that the interventions made by the CEDRW have been successful in mobilizing the rural community, especially in regard to education and women's development. The series of camps that were conducted in response to the demand of the village women are sufficient proof of the growing awareness in the community. Furthermore, researchers observed that the women also participated actively at Centre meetings by expressing their views on certain issues raised. Other indicators of project success include the various articles prepared by the girl school dropouts during their vocational training programme and the men's emulation of the women's savings and credit groups.

On the whole, the developments occurring so far in Shivapur and other villages strengthen the need for adopting Freire's approach and Gandhian perspectives in rural development.

## **IV. The Vigyan Ashram**

The Vigyan Ashram near the village of Pabal in Maharashtra State has developed a system capable of educating and empowering school dropouts through training in basic science and technology at affordable cost and in an acceptable time frame. (The word *vigyan* means science and *ashram* denotes a place of simple living and high thinking.) The experimental project initiated by Dr. S.S. Kalbag in 1983, under the auspices of IIE, has developed a skills training programme that emphasizes ***learning while doing*** and ***servicing the community***. In 1985 this programme was approved by the Board of Secondary Education, Maharashtra, as a rural technology course and is still implemented in schools as a part of the technical stream. The course adopted in the school caters to both formal as well as non-formal education students. A similar course is also conducted exclusively for non-formal learners on a full-time basis at the ashram.

## Principles

1. The basic principle governing the Vigyan Ashram model is **learning while doing**. It is based on the assumption that working with your hands stimulates the intellect.
2. Technology is the application of science, and is the collaboration of head and hand.
3. Basic scientific procedures such as observation, measurement, recording, classification, documentation, and formulating and testing hypotheses are essential for everyone and can also be easily practised in everyday life.
4. Education means training for real life.
5. All labour is worthy of dignity and there are no such things as **white collar** or **blue collar** jobs.
6. Any education system to become relevant and life-based must enable learners to offer services to their community.

## General objectives

1. To integrate education with development
2. To stimulate the intellect in order to enable learners to reach their highest potential
3. To provide a broad spectrum of technical education through access to many modern technologies
4. To develop new opportunities in the rural economy through local support

## Specific objectives

1. To provide skill training in the areas of agriculture, animal husbandry, food processing, food preservation, soil science, sewing and knitting, electrical assembly, and equipment maintenance
2. To develop the ability to take appropriate management decisions, to quantify and document, and to do simple accounting, quality measurement and quality analysis
3. To develop individual self-confidence and self-respect

## Courses

The ashram offers a course titled **Introduction to Basic Technology** exclusively for non-formal education students. This course lasts one year. At present, schools in 15 villages also offer this course. In addition, there is the course in rural technology, which lasts almost a year (300 days) and is open to 20 students aged 17-25. This course consists of four *themes*, with related topics and skills, as indicated in the following table:

Theme	Topic	Resource Centre	Skills Developed
Living (human and society)	Home	Food lab	<ul style="list-style-type: none"><li>▶ Prepare preservative food products e.g., jam, pickles, biscuits</li><li>▶ sewing and knitting</li></ul>
	Health	Rural lab	<ul style="list-style-type: none"><li>▶ provide first aid</li><li>▶ conduct pathological tests</li><li>▶ home remedies for common ailments</li><li>▶ oral rehydration therapy</li></ul>

Theme	Topic	Resource Centre	Skills Developed
Living (plants and animals)	Agriculture	3 acre plot	<ul style="list-style-type: none"> <li>▶ plant and grow vegetables, crops</li> <li>▶ use of pesticides</li> <li>▶ irrigation</li> </ul>
	Animals	Poultry farm Cattle (goats, cows)	<ul style="list-style-type: none"> <li>▶ undertake poultry and cattle raising</li> <li>▶ artificial insemination</li> <li>▶ diagnosing pregnancy</li> </ul>
Non-living (material)	Engineering	Workshop	<ul style="list-style-type: none"> <li>▶ undertake measurement</li> <li>▶ soldering, welding</li> <li>▶ use carpentry tools</li> <li>▶ repair tractors</li> <li>▶ construct buildings, equipment and geodesic domes</li> </ul>
Non-Living (Non-material)	Energy and environment	<ul style="list-style-type: none"> <li>▶ Water resource unit</li> <li>▶ Electrical lab</li> </ul>	<ul style="list-style-type: none"> <li>▶ prepare energy devices-pressure stove, bio-gas stove.</li> <li>▶ maintenance of engines (diesel)</li> <li>▶ measure water table</li> <li>▶ install water pipeline, hand pump etc.</li> <li>▶ make electric circuits</li> </ul>

The students are divided into four groups, one for each of the course themes. They are rotated through all four themes for the duration of the course. Each student is required to undertake a project related to each of the themes. In addition, all students receive training in financial management skills such as estimating a budget, maintaining accounts, managing stock, and analyzing costs.

### Major achievements

1. A survey conducted in an area 25 kilometres around Pabal revealed that a large number of ex-ashramites have started small enterprises, workshops and poultry farms. These include welding works, fabricators, a photocopy shop, and women entrepreneurs who raise poultry. Other graduates have acquired sewing machines and become tailors.
2. Schools in the vicinity have benefited from offering the rural technology course. There have been increases in enrollment due to the entry of students from the neighbouring villages. The students have performed better in technical subjects as well as the subjects in the formal curriculum. There has also been an increase in the percentage of students passing the high school standard examinations administered throughout the state. Finally, the contributions of students to their home communities have facilitated closer co-operation between these communities and the schools.

### Conclusion

The Vigyan Ashram provides vocational and technical education to NFE learners directly at the grassroots level. It makes the course content more locally applicable by emphasizing the dignity of all labour and the necessary co-operation between *the head and the hand*. Nevertheless, in the future the Vigyan Ashram intends to move into the area of information communication technology by developing and applying computer software applicable for rural development programmes. Various kinds of software have already been used

as feasible and efficient media of instruction. However, computers do not replace instructors, nor will they reduce the importance and necessity of practical work.

## V. The Lok Jumbish Project: Education for Girls

If primary education is a matter of concern for the whole of India, it is a major worry for the state of Rajasthan, whose literacy rates are the lowest in the country. In 1991, the literacy rate for men was around 60 per cent but only 19 per cent for women. In other words, only one of five women in Rajasthan was able to read and write. In rural Rajasthan the situation is even worse, with only 11.6 per cent of the women being literate. In this context, a project like Lok Jumbish becomes essential. The Lok Jumbish Project aims at achieving the goal of Education for All through people's involvement and participation. (The name, *lok jumbish*, combines the Hindi word for *people* and the Urdu word for *movement*.) While many evaluations and reports have appeared dealing with Lok Jumbish and its success in the spread of primary education, here we focus on its work with respect to innovative programmes for the spread of education among girls. Although the project's efforts in improving enrollment and retention through intervention in the formal education process have been widely recognized, the emphasis here is on the various *non-formal methods* of education that are used to target marginalized populations, especially girls.

### *Project objectives*

The Lok Jumbish Project (LJP), an offshoot of earlier efforts, began in 1992 with funding from SIDA and support from the state and federal governments. The philosophy of the project is based on the belief that the mere provision of physical inputs is not sufficient for ensuring universal access to primary education. Instead, a strong partnership between parents, children and teachers is essential. The basic aim of this project is the universalization of primary education, with emphasis on both formal and non-formal education for all children up to 14 years of age. Non-formal education was indeed considered as a necessary tool for the spread of literacy to remote villages and socially conservative communities.

The LJP has developed a three-fold approach: 1) improving the quality of education through training teachers and overhauling the curriculum, 2) changing attitudes and developing trust in education among communities that are resistant to education due to socio-cultural values, and 3) creating an environment for women to participate in the system, thereby increasing girls' access to education. The long-term objectives of the LJP are:

- To provide access to primary education for all children below age 14
- To ensure that all children complete primary schooling
- To emphasize the quality of education
- To bring girls to the same level as boys and make education an instrument of women's equality
- To enable the poorest sections of society to participate equally in basic education
- To provide opportunities for lifelong education
- To effectively involve people in education management

The LJP's primary strategy has been to mobilize and involve the local community in the demand for better delivery of education services. The idea behind this is that in the course of time it becomes the community's own agenda and therefore sustainable. The LJP achieved these objectives by *environment building*, school mapping and micro-planning, improving existing school facilities, producing and supplying textbooks and learning materials, training teachers, and promoting non-formal education and women's development. The village education committee (initially the *village core team*) in each community is ultimately the body responsible for the long-term education of its children.

Starting up in 1992, the LJP completed its first phase in 1995. The second phase began in 1995 and ended in 1998. Unfortunately, the third phase, which was planned to begin in 1998, is still not yet under way. The total project expenditure over the five-year period amounted to Rs.1,524 million of which the SIDA contributed half, the Government of India one third and the State Government the rest.

The project is implemented through *blocks* or sub-districts, each block divided into clusters of 25-35 villages and with an average population of 150,000. Altogether, 75 blocks were covered under the Lok Jumbish Project by October 1999 comprising more than 12,000 villages, 305 clusters and about 11 million people. By that time, 529 new primary schools and 540 Shiksha Karmi schools were opened, 268 primary schools were upgraded to upper primary schools and 5,010 NFE centres (see below) were opened to supplement the formal system.

At present, LJP is winding up its activities in some areas, which will be soon taken over by the Government. After the SIDA stopped funding, activities have almost come to a standstill. Another international funding agency has already agreed in principle to take its place.

### *Lok Jumbish strategies for educating girls*

The LJP has tried to influence formal schooling in the area it serves through teacher training and curriculum revision. Specifically, the aim has been to make both teachers and curricula much more gender sensitive than before, so that schooling becomes a more positive experience for girls.

In addition, the LJP has introduced a number of innovative institutions related to non-formal education. In addition to village NFE centres, these include education camps and forums just for girls and workshops for adolescent girls and boys together.

In all these efforts, the principle of gender sensitivity is woven into the fabric of the Lok Jumbish educational approach. It serves the cause of education for girls indirectly by changing attitudes, challenging social stereotypes, and redefining girls' roles paving the way to the empowerment of women through education.

### *Breathing life into schools: intervention in formal education*

Lok Jumbish took over malfunctioning government schools in backward areas for implementation of its agenda. The schools remained as they were in terms of structure and personnel. The intervention took the form of teacher training and introduction of a revised curriculum. The entire exercise was intended to improve the quality of education in government primary schools and make them attractive to village children and parents. At the same time, village committees and core groups worked to raise awareness of the importance of education amongst the villagers.

One important outcome of these efforts was an increase in participation, especially of girls in primary education. The average percentage of overall participation in primary education increased from 46.7 per cent in 1994 to a substantial 76.8 per cent in 1998. The girls' participation rate also jumped from 29.4 to 68.1 per cent. The following table provides a brief summary of the improved participation rate in primary education over the years.

Other data show improved school retention rates among girls attending LJP schools, as well as higher test scores in Hindi language and mathematics. In addition, it appeared that the single most important component was teacher training, which not only led to better teaching techniques, but also increased the motivation of teachers to perform well. Along with the new curriculum, this motivation contributed a great deal to improvement in quality.

## Improvement in Participation Rate in Primary Education in Blocks under LJP

	1994-1995	1995-1996	1996-1997	1997-1998
Total	46.7	59.8	69.2	76.8
Boys	61.1	70.0	77.5	84.3
Girls	29.4	47.9	59.5	68.1

Source: Lok Jumbish, The Seventh Report. (January, 1998)

### *Bringing learning to the village courtyard: Sahaj Shiksha Centres*

These NFE centres initially started in 6 blocks and eventually spread to around 33 blocks, with an increase in enrollment from 8,336 in 1993 to 45,839 by the end of 1997. By October 1999 there were 5,010 centres serving children who could not attend formal schools. The dropout rate was negligible. It was heartening to find that 6,835 (out of the initial 8,336) moved on to formal schools after completing the non-formal curriculum. The ratio of enrollment of boys to girls was 3:5, which indicated that the girls benefited more from this non-formal education opportunity than boys. In addition, an evaluation study found that the programme had been successful in attracting the target segment, namely girls belonging to scheduled tribes and castes.

The *Sahaj Shiksha* centres, unlike formal schools, were usually located within the boundaries of the hamlets and literally brought learning to the doorsteps of the girls. Most of these centres operated for two or two-and-a-half hours in the evening. Parents or grandparents were often present, which imparted seriousness to teaching-learning activities at the centres. Smaller children too young to go to school sat nearby with their sisters and became familiar with the process of learning. The teachers were members of the local community who spoke the children's own dialect. They were recruited for the job by the village education committee or core team, who was also responsible for enrolling the children at the centres.

### *Short-term interventions*

In addition to the regular ongoing education programmes, the LJP also organized education camps of shorter duration. For example, the *Balika Shiksan Sirvirs* were camps held for adolescent girls who could afford neither formal nor non-formal education. The first camps were four months in duration but as they became more popular their length increased to six-and-a-half months. In addition to teaching the girls how to read and write, the camps provided opportunities for them to increase their self-confidence. One positive result was that 75 to 80 per cent of the girls from the camps went on to formal schooling.

In addition, the LJP held workshops attended by both adolescent girls and boys. The purpose of these residential workshops, which lasted five days, was to help girls overcome their shyness, develop self-confidence, learn about their situation in society, question social stereotypes, and acquire information about the emotional and physical changes occurring during adolescence. Girls involved themselves in a number of activities, including traditional male ones like riding bicycles and playing cricket. They also participated in public excursions and mock elections. By the end of the workshops, most participants had developed the capacity to enter into dialogue with their peers (including boys) and had begun to acquire a new self-image.

Finally, the Lok Jumbish organized a variety of activities and institutions for specific purposes. These included arts forums for adolescent girls, camps for children with disabilities, empowerment forums for women teachers, hostels for girls, and the Women's Residential Institute for Training and Evaluation (set up in 1994), whose purpose was to train women in rural areas to be teachers.





## Conclusion

In spreading literacy and primary education in a poor, undeveloped state like Rajasthan, Lok Jumbish's initiatives were successful basically because of its belief in participatory planning and implementation. Although the ultimate aim was to bring children into the mainstream education system, the focus has been on non-formal education in a variety of forms (centres, camps, etc.) according to the needs of each community. The most significant feature in this approach is the respect given to the needs of the community and an understanding of social, economic and cultural constraints.

The Lok Jumbish Project was able to transform village schools with its touch. Teachers from the primary school in Radhanagari, who were all praise for Lok Jumbish, were asked how they could believe that the LJP's intervention had changed education. Weren't they after all the same people as before? They replied unhesitatingly, *"Within all human beings there exists goodness and the spirit of work and dedication, but it has to be woken up [jagrithi, which literally means awakening], and that is just what Lok Jumbish did"*. The transformation was evident in the manner in which they went about their daily routine work, in the enthusiasm with which they spoke of the movement and in the concern they showed about the school. It seemed like the movement was theirs. And that was what made the difference. The teaching-learning process also had changed with the new training. It had become child-centred and life-centred. The child had become an active participant in learning and the curriculum was made relevant to the immediate life experience.

## VI. The Integrated Abujmarh Tribal Development Project: Sustainable Development for Ethnic Minorities

The Bastar District is a remote plateau located in the extreme southeastern part of Madhya Pradesh State. The western part of the district, rugged and watered by numerous streams, is known as the Abujmarh Hills. If any part of India is still *terra incognita* to nearly all travellers, it is Abujmarh, which has the reputation



of a land free from rules and regulations, inhabited by the *Hill Marias* as popularized in the anthropological literature. Abujhmarh, comprising 250 villages, is described as a *tangled knot of hills*, a back-of-beyond that remains cut off from the rest of the world for nearly half the year. Because of their extreme geographical isolation, the Hill Marias have a very primitive economy, their mainstay being the slash-and-burn cultivation practised on the steep hill slopes. Traditionally, they have bartered forest products (resin, cocoons) for trade goods like salt, chillies, tobacco and cloth. The barter system is still prevalent, and the tribal people are most unscrupulously and liberally exploited by traders.

The main problems of Abujhmarh, apart from extremely poor communication, are 1) the lack of medical facilities and a high mortality rate, especially among infants; 2) the lack of education facilities and extremely low literacy; 3) economic exploitation by various agencies; and 4) unwillingness on the part of government officials to work in the area.

In August 1985, the Ramakrishna Mission established a *base camp* or ashram at Narainpur, an administrative headquarters in Bastar District which is also the gateway to Abujhmarh. The objective of this centre was to direct activities aimed at eradicating illiteracy, ill health and economic deprivation amongst the Hill Marias of Abujhmarh, enabling them to eventually join the mainstream of the nation. With this objective in view, the Mission set up the Integrated Abujhmarh Tribal Development Project at Narainpur. The project serves an area of 3,905 square miles and a population of about 26,000. Despite adverse circumstances, the Mission has successfully started making major inroads against poverty, ignorance, sickness and economic exploitation. In addition to its own resources, the Mission relies on liberal grants-in-aid provided by both the state and federal governments.

A 60-acre plot of land provided by the state government is the setting for the Mission's model school, a 100-bed hostel for boys, a fully equipped modern 30-bed hospital, a vocational and agricultural training centre, an NFE centre, and a *fair price shopping complex* for local people.

### *Project activities*

The activities of the Mission, using innovative approaches, fall into the general areas of literacy and education, health, and economic development.

### *Literacy and education*

Missionaries of the Ramakrishna Ashram (both men and women), assisted by a devoted band of qualified and dedicated staff members, look after a number of education institutions that serve the needs of the tribespeople. Foremost amongst these is a model residential school exclusively for tribal students, whose current enrollment is 341 boys and 161 girls. In addition, the Mission operates five residential co-educational schools currently serving 325 boys and 123 girls. Students at all six of these schools receive training in agriculture and horticulture using land that is part of the school premises.

The Mission also provides services for younger children. In collaboration with VISHWAS, a sister organization managed by devotees of the Ramakrishna Mission, the Narainpur centre administers 69 preschools located in the far-off villages of the Abujhmarh Hills. The purpose of these preschools is to prepare children 3 to 6 years of age to enter the regular school environment. Many of these preschools also have classes for girls and women between 11 and 65 years of age. Here they learn the *three Rs* and skills needed for everyday life.

It is an outstanding feature of the Mission schools that once students are admitted they continue to study uninterrupted until the completion of their studies. This dedication, which includes taking on additional schoolwork during summer vacations, may account for their success in formal examinations at both primary

and middle levels. In the last five years, the examination pass results have been almost 100 per cent, extremely positive for ethnic minority students. It was also heartening to note that out of 66 students who completed their studies in the Mission school, as many as 15 of them sought admission to engineering courses and 4 of them succeeded in securing admission to medical, veterinary, polytechnic and Ayurvedic courses respectively. About 20 entered graduate courses in arts, science and commerce, and 9 obtained regular employment.

### *Health and nutrition*

Activities in this area include maintenance of a 30-bed hospital and health centre, 5 clinics located throughout the district, a mobile dispensary, and a project in community health services for remote villages not reached by any of these.

### *Economic improvement*

Project activities in this area include the operation of a tribal youth vocational training centre, an agricultural training and demonstration farm, and the Central Sector Scheme for Agricultural Extension. The purpose of the latter (begun in 1994) is to introduce the tribal people to modern, scientific methods of farming, thereby reducing their reliance on traditional shifting cultivation. In addition to the standard functions of extension services (demonstrating and supplying new inputs such as seeds, fertilizer, technology, etc.), the Project is involved in organizing village self-help groups, training farmers to use new technology, and promoting linkages between farmers and agricultural institutions in India (government agencies, universities, research centres).

Finally, in connection with agricultural development in the Abujmarh Hills, there is the Rajiv Gandhi Watershed Project. The purpose of this project, which covers an area of 3,140 hectares, is to improve irrigation and reduce the effects of flooding. Since 1995, 54 tanks, 11 percolation tanks, 14 check dams and 6 stone weirs have been constructed. In addition, a number of trees were planted and fruit tree saplings distributed amongst 3,400 villagers.

### *Conclusion*

The various activities undertaken by the Ramakrishna Mission Project have ushered in a new era in the life of the tribal communities. This success has occurred largely because of the holistic, integrated approach taken by the Mission, targeting the interrelated problems of illiteracy, poor health, economic exploitation, and ineffective agricultural practices.

Looking at education, we find that the project adopts a similar integrated approach for the all-round development of learners. Children are admitted first to the preschools at a tender age and continue on to the primary and secondary boarding schools. They generally do not go home even during summer vacations. They learn how to lead well-disciplined and healthy lives under the guidance of a group of teachers who are dedicated and entirely devoted to their noble work. Education is totally free of charge. The quality of the graduates of the ashram schools is high and brings a good name to their efforts.

The project initiated by the Ramakrishna Mission at Narainpur is playing a vital role in achieving its objectives. But the Abujmarh Hills is only a small corner of India and a single project does not touch even the fringe of the problem. Replication of this project in other similar parts of the country is a genuine and urgent need. Several ashramites observed that the State Government wanted the project to extend its activities to the entire district of Bastar. But it was not possible for them to take up the offer because their resources, especially in terms of devoted and selfless workers, were rather limited.

Keeping in view the approach adopted by the Integrated Abujmarh Tribal Development Project, we can safely recommend that there is an immediate need for policy makers to bring under one umbrella the various activities affecting the welfare of tribal populations. The project is thus a worthwhile one to be adopted as a model.

There is also a need to create a sense of confidence amongst tribal people before launching any programmes for their welfare. Anything imposed on them will certainly not be successful unless they themselves are convinced that the programmes will be of real benefit to them. The agencies functioning for their welfare must enjoy the full confidence of the target group. Moreover, the twin factors of dedication to work and devotion to duty are absolutely necessary.

## VII. The Agramee Kishipur Project

In another corner of India, other ethnic minorities struggle with hunger, disease, landlessness, illiteracy and a situation characterized by a lack of basic services, leadership, and political will. The present-day district of Rayagada in the state of Orissa is inhabited by a mixed population of tribal groups (Kondhas, Parajas, Souras, etc.) and scheduled castes.

In 1981, the NGO Agramee undertook its first experiment in the *block* (sub-district) of Kashipur, fascinated by the overwhelming response and initiatives on the part of tribal people towards economic development opportunities. A group of tribal youths supported the project team and joined them during the second year of project activities. At present, the Agramee Kashipur Project carries out a variety of education and economic development activities in six blocks of the district. Some of these have been replicated in other tribal districts of Orissa State.

### *General objectives*

1. To develop an alternative model of education for tribal areas to be replicated elsewhere
2. To make elementary education universal throughout inaccessible tribal areas
3. To encourage community participation in order to sustain programmes in the future
4. To link education with development
5. To increase literacy and classroom learning
6. To make education a medium for the empowerment of tribal students

### *Specific objectives*

1. To use both traditional and mass media to generate awareness in the community
2. To ensure community involvement and participation in operating village schools by forming village education committees to assume responsibility
3. To develop and implement a child-centered curriculum
4. To help children develop a spirit of co-operation and mutual self-help
5. To strengthen classroom learning through practical experience
6. To introduce children to basic economic activities
7. To generate, with the people's co-operation, the initial capital for sustaining schools and NFE centres in the future

### *Significant activities*

Agramee intervention for tribal development combines educational inputs along with economic development activities for a holistic development of the community. In addition, the project has made systematic efforts to enable primary school age children to acquire literacy, numeracy and other basic

skills. This is necessary because the majority of tribal children cannot benefit from the existing system of education provided by the Government due to a combination of reasons, including poverty, the need to work and the inadequacy of government schools.

In response the project has initiated a variety of programmes to meet the needs and priorities as identified by local tribal communities. These programmes include Non-Formal Education for Elementary Children (70 NFE centres in two remote blocks), Innovative Education in Remote Tribal Areas (100 additional centres with curricula focusing on village economic development), district resource units for NFE teacher training and materials development, an *education complex* to improve the literacy rate amongst tribal girls, *children's festivals*, creative workshops for children, vocational training, science exhibitions, parent-teacher workshops, health checkup camps, and *Bal Sansad*, which is a programme to educate tribal children about the existing political system in India and their rights in regard to voting and other forms of participation.

### *Elements of innovation*

Ethnic minority communities have found it difficult to relate to the prevailing system of formal schooling. They require a different model of education that meets their own needs and priorities. The Agramee Kashipur Project has attempted to provide such a model that includes a number of innovative features.

First of all, members of the community are involved in selecting their own teachers for the NFE centre serving their children. This enables better rapport and communication between teachers and pupils, and bridges the language barrier. Parents and other village elders are encouraged to come to the classroom to share and learn. The village is also expected to provide a building where children can study.

Second, the curriculum is relevant to the local situation of the children. Teachers do refer to the formal school syllabus, in so far as it facilitates the learning process. But they also make use of additional material relating to the lives of the tribal people. Regular feedback from the teachers ensures that the material is being used and is acceptable to both the students and the community.

Third, teachers are encouraged to use the folk media of songs, dance and legends to enliven teaching and help the children learn faster. This method also helps to ensure the perseverance of tribal folk traditions, as well as helping the people identify more positively with the education model they are adopting. In addition, the teachers encourage children to participate more actively in the teaching-learning process by teaching each other, with older boys taking charge of small groups of younger children.

Finally, realizing that the process of education cannot be taken up in isolation, Agramee's intervention combines economic activities with education and there are attempts to link education with the socio-economic change and development activities in the villages. Children are encouraged to participate, even if as observers, in the planning processes, and issues related to development are incorporated into the NFE centre's curriculum. The teachers introduce topics concerning the children and their surroundings. They are not only teachers as such but have also received training to initiate participatory action for social change in the village.

### *Achievements*

At present, Agramee is managing 233 NFE centres in 7 tribal districts of Orissa. All of these institutions are operating with the active participation of the village communities. Currently, 7,584 children are enrolled, of whom 3,293 (about 45%) are girls. Village education committees have been formed and are responsible for the regular functioning of the centres. Of the 1,351 members of these committees, 559 are women.

The educational process has helped to increase the self-confidence and capability of students to a great extent. In many of the villages where the NFE centres function, former students have taken over the teaching duties. In many instances, these people are doing much better than their counterparts who have undergone formal schooling. In some of the villages, youths who studied at the centres have now organized youth clubs.

Currently, there are 48 youth clubs and village development committees, 18 irrigation user societies, 15 education organizations at the *panchayat* level, 5 such organizations at the block level, and one at the state level. At each level of these forums, Agramee tries to ensure people's co-operation. The youth clubs and village committees closely monitor the education programmes run by Agramee in the villages. They also take initiatives for increasing enrollment at the centres. At the *panchayat* level, members of the forum work together as a pressure group to ensure that the government schools in their own area are run more efficiently. They are also mobilizing parents to send their children to school. The state-level forum, the Adibasi Shakti Sangathan, tries to influence policy matters related to education in the tribal areas of Orissa.

### Conclusion

The programmes of education for tribal areas developed by Agramee have found wide acceptance amongst other voluntary organizations in the state. Four such organizations have received funds from the Government to initiate education programmes based on this model. The Social Work and Research Centre (SWRC), a national-level voluntary organization, has also adopted this model, as have 125 NFE centres located in other underdeveloped areas of the country.

The success of Agramee activities demonstrates that NFE programmes are more successful than the formal school system in making primary education universal in tribal areas. Therefore, it would seem that additional salary support and training for NFE instructors is highly desirable, especially in areas with low literacy.

## VIII. Conclusions and Recommendations

These six examples of NFE programmes in India demonstrate the success of using innovative, unconventional methods to reach populations mostly excluded from formal schooling. This success rests largely on two factors. First, the programmes feature non-standardized, locally developed curricula that correspond to the priorities and life ways of both children and adult learners. Second, innovations in programme content and delivery occur directly in response to the needs of the local community. Instead of directives from government bureaucrats, demand as expressed by local community members largely determines the input of the NFE programmes.

The six projects and their activities clearly show the urgent need to contextualize and decentralize education, especially in the rural areas. In this connection, there should be rural development centres established at the grassroots level to facilitate decentralization and to make the education system more relevant for sustainable development. Similarly, more funding is needed for materials development at the local level, especially in regard to the preparation of appropriate science materials.

Finally, these projects illustrate the importance of reaching out to those who have previously been neglected or under-served. Whether they are ethnic minorities in remote parts of Orissa or Madhya Pradesh, or rural women and girls in conservative Rajasthan, the marginal sections of society deserve the same opportunities for education and social betterment that others in more favourable circumstances already receive.



# Cilandak Resources Learning Centre: Action Research on a Package B Learning Group Programme

## An Innovative Approach to Non-formal Education for Sustainable Development in Indonesia

### I. Introduction

Indonesia's national policy of nine years' compulsory basic education, dating from 1990, states that it is the duty for each citizen to have a minimum six years of education at primary school and three years at lower secondary school.

In addition to formal schooling, basic education is also available out of school by means of the Packet A Programme, equivalent to the primary level, and the Packet B Programme, equivalent to the lower secondary level. Those who do not have any access to primary and lower secondary schooling have benefited from these programmes.

In general, Package A and B participants and their families are poor, have few skills and abilities, and are unable to enjoy access to economic activities. The two programmes help these communities increase their standard of living.

### Overview

1. In general, the efficiency and quality of primary and lower secondary schools were gradually improving, at least up until the last two years. In 1990 access to primary schooling expanded, and reached the net enrollment rate of 92 per cent. In lower secondary schools, this rate was 36 per cent. The introduction of the nine years' compulsory basic education requirement further boosted equality of opportunity at both primary and lower secondary levels. The net enrollment rate for children 7-12 years old who attended primary schools increased to 94.9 per cent, while in 1997 the rate for children 13-15 years of age in lower secondary schools was 55.9 per cent. However, the recent economic crisis in Indonesia has had a negative effect. Thus in 1998 the net enrollment rate was down to 93.7 per cent for primary schools and 55 per cent for lower secondary schools. The crisis has also resulted in an increase in dropout and repetition rates, and a decrease in the transition rate between the two levels.

Equivalency education in Indonesia has expanded through both Packet A and Packet B Programmes. Since the introduction of nine years' compulsory basic education, the number of students participating in the Packet A Programme has increased, reaching 44,803 in 1997/98. Most of them (89.7%) have passed the primary school equivalency examination to continue studying at the lower secondary level. Since the beginning of the Packet B Programme in 1994, participation has increased, with 94,345 students in 1997/98, most of them (90%) passing the lower secondary equivalency exam. Looking at the proportion of participants who passed the examinations at both levels, we can expect the Packet A and B Programmes to play a more important role in the future because of their high efficiency rates.

2. South Jakarta District is one of five districts in DKI Jakarta Province. Compared with other districts in the province, it has the biggest population (1,973,347 people) and is divided into ten sub-districts. In every sub-district some villages are considered to be slum areas. The people living here are poor and there are many school dropouts. Their incomes are very low, and they are not able to send their children to school. The dropout rate from primary school is more than 7.2 per cent and is twice that (14.6%) for lower secondary schools. These rates have been increasing since the economic crisis of 1997. To overcome this problem, the Directorate of Community Education, Directorate General of-Out-of School Education, Youth and Sports, Ministry of National Education, set up the Packet B Programme.
3. The target group for this programme is quite large. For this study, it was limited to the Packet B learners at Sanggar Kegiatan Belajar (SKB) Cilandak (Cilandak Resources Learning Centre) and their parents. The target area of the study was South Jakarta District.
4. The Package B Programme intends to help young people obtain the required nine years of basic education. Programme targets primarily are those who have completed primary school or the equivalent, along with dropouts from lower secondary school ages 13-18 who no longer have any access to schooling.

There are 69 Packet B learners in SKB Cilandak. None of their parents were able to send them to school. Instead, almost all of them or 78% (53 learners) helped their parents with odd jobs of various kinds (market porter, servant, washing vehicles, delivering newspapers, etc.).

### *Objectives of the study*

1. The general objective was to improve the implementation of the Packet B Programme in order to have a positive double impact – to increase academic achievement and family income.
2. Specific objectives were to find innovative approaches to accomplish the following:
  - a. to improve the motivation of both tutors and learners
  - b. to improve the skills of the learners and to enable parents to conduct income generating activities
  - c. to make a positive contribution to the development of national policy, especially in regard to the effective implementation of the Packet B Programme

### *Rationale and justification*

The learners have low incomes and live in a slum area. These conditions are disadvantageous for physical and psychological development.

In 1998, a detailed survey covering 100 families of learners participating in the SKB Cilandak Package B Programme indicated that 82 per cent live in inadequate housing, with no bathrooms and no walls between rooms. Furthermore, 78 per cent of the learners had to help support their families financially.

Psychologically, during puberty the learners are usually unable to control their emotions, although they are expected to help their parents make a living and also to finish their studies. (Nevertheless, many of them are mature for their age.) On the other hand, the learners face conditions that compromise their health and safety. Therefore, there are obvious conflicts of interest involved in reaching the objectives successfully.

This study focused on the relationships between tutor, learner and family, along with the integration of the Package B Programme with an income-generating programme for the learner and parents. This emphasis is based on the assumption that the learner is motivated to learn in order to help his or her family, leading to an increase in the family income and parental support for the learning activities of their children. The assistance of the tutor was considered essential for both academic learning and income generation.





### *Scope and coverage of the study*

1. Implementation of technical and managerial skill guidance based on the type of income-generating activity chosen by the learner and his/her parents
2. Family income improvement through an income-generating programme aided by the academic learning achievement of the learner
3. Tutor motivation in the task of advising both academic and income-generating programmes
4. Co-ordinating the implementation of the Packet B Programme with an income-generating programme

## **II. Description of the Project**

### **1. Purpose**

To find improvement in the efficiency and quality of the Packet B Programme integrated with an income-generating programme (IGP) for the learner and the learner's family.

### **2. Elements of Innovation**

#### **a. *Teaching and Guidance***

Knowledge was defined as the output of the teaching process, while ability was the output of the guidance process. The processes are divided between academic learning and the income-generating programme. The subject matter was based on the national curriculum.

#### **b. *Management of the Packet B Programme***

The learners were recruited for two learning groups representative of slum dwellers, one from on campus at SKB Cilandak, and one off campus in the market. The researchers observed the academic learning and income generating learning processes of both groups.

c. *Management of the IGP*

Income generating efforts were based on an agreement reached between the tutor and the learner and his/her family members after a thorough discussion. The tutor took an active role as both manager and technical expert during the first three months of income generating activities; after that, this role was gradually reduced.

d. *Motivation of the Learner's Parents*

During the preliminary stage of the activities, the motivation of the parents/family to support the Packet B Programme was low. They were too busy working to survive from day to day, and they needed their children to help them. The motivation of parents changed gradually while their children were involved in the Packet B Programme, and while at the same time the learner's parents were participating in the IGP. The tutors helped them to choose an income-generating enterprise that was easy to undertake, low risk and profitable.

### III. Research Findings

#### A. Quantitative Results

No.	Name of the Learner	Kind of Income Generating Effort	Capital	Level/Class Package B Programme
01	Nanang Hidayat	Selling newspapers	Rp. 400,000.00	2nd level
02	Firmansyah	Washing vehicles	Rp. 300,000.00	2nd level
03	Endang Kurnia	Cake/snack production	Rp. 200,000.00	1st level
04	Dewi Prihatin	Peanut crisp production and sewing	Rp. 400,000.00	2nd level
05	Ponsianus Soro	Raising chickens	Rp. 400,000.00	1st level
06	Roji	Fried peanut production	Rp. 300,000.00	1st level
07	Namin	Raising chickens	Rp. 400,000.00	3rd level
08	M. Yakub	Selling fried rice	Rp. 500,000.00	3rd level
09	Agus Supriyanto	Selling fruit	Rp. 400,000.00	2nd level
10	Heny	Selling canteen food	Rp. 500,000.00	3rd level
11	Isdiyanto	Selling gado-gado	Rp. 500,000.00	2nd level
12	Asmadin	Selling animal fodder Sewing and embroidery	Rp. 300,000.00	3rd level
13	Fandri Onni	Silk screening	Rp. 800,000.00	2nd level
14	Effendi	Sandal production	—	1st level
15	Nurdin Abdul Aziz		—	2nd level

Details of the study results are as follows:

a. **The learners and their families:**

1. About 84 per cent of the learners joined the Packet B Programme because of economic reasons and about 16 per cent cited other reasons (i.e., engaging in gang fights, laziness, divorced parents).
2. Before the Packet B Programme, about 44 per cent were unemployed, about 30 per cent worked part-time, and about 26 per cent helped their parents.
3. Around 70 per cent of the learners chose the Packet B Programme because of its convenient time schedule for learning activities, and about 30 per cent because these activities were free of charge.
4. Around 60 per cent of the learners participated because they could learn without having to leave their jobs, around 20 per cent wanted to improve their education level, and 10 per cent wanted to get a certificate.

5. About 60 per cent were satisfied with the schedule of learning activities (three times a week), and about 40 per cent had problems co-ordinating learning times with their jobs.
  6. About 20 per cent of the learners lived more than 20 kilometres from the activity learning location; about 30 per cent had their homes 10-20 kilometres away, and about 60 per cent lived within 10 kilometres of the learning site.
  7. About 30 per cent of the families supported learners even though they had to work, about 60 per cent assisted with transportation costs and learning materials, and 10 per cent gave only moral support.
  8. Sixty per cent of the families had nothing at home to facilitate learning, and 40 per cent had at least a table and chair.
  9. About 84 per cent of the families felt that their homes were incompatible for learning because of noise, cramped space and no circulation; but 26 per cent believed their homes were adequate enough.
- b. **The income generating programme:**
1. About 70 per cent of the learners were interested in a low-risk programme involving marketing, and about 30 per cent said they wanted skills.
  2. Regarding involvement in management of the income generating programme, about 40 per cent specified brother/sister, mother and the learner, about 40 per cent mother and the learner, about 10 per cent father, mother and the learner, and 10 per cent didn't know.
  3. All learners agreed that the job descriptions provided were not clear. The important focus of the efforts was on making profits.
  4. About 60 per cent of the income generating activities were dominated by the mother, and about 40 per cent by the father, brother and the learner.
  5. In about 66 per cent of the cases, the salaries were determined through family agreement and in 44 per cent they were based on the productive capacity of the employee.
  6. As for method of distributing salaries, about 50 per cent disbursed payment according to personal productive capacity, about 40 per cent according to need, and 10 per cent did not respond.
  7. As for financial resources supporting the enterprise, about 84 per cent obtained these through loans, and 16 per cent relied on family financial capital.
  8. As for record keeping, about 60 per cent did this irregularly, and 40 per cent not at all.
  9. Regarding monthly profits, about 70 per cent were unclear, and 30 per cent reported Rp. 500,000.00 - Rp. 1,000,000.00.
  10. When asked about the capacity to set money aside from profits each month to repay loans, about 10 per cent reported Rp. 50,000.00, about 40 per cent Rp. 30,000.00, and 50 per cent were unsure.
  11. All respondents felt that it was easy to get material resources for running a business.
  12. As for equipment used for running their enterprise, about 60 per cent used traditional machinery, about 30% combined manual labour with machines run by electricity, and 10 per cent did not use machinery.
  13. About 60 per cent of the learners went around the village seeking business, and about 40 per cent determined who their specific consumers would be.

14. About 30 per cent sold their products on consignment to small shops, about 10 per cent sold them at itinerant food stalls, 10 per cent sold them in small rented shops, 20 per cent sold them from roadside stalls, 10 per cent sold from their homes, and 20 per cent sold things everywhere.
15. As for priority for using profits, about 60 per cent said they spent to survive, and 40 per cent were unclear.
16. Around 40 per cent of the learners reported that the income generating programme was very useful for increasing family income, about 40 per cent said it could supplement the family income as a side job, and 20 per cent were unclear.

c. **The work of the tutors:**

1. About 20 per cent of the tutors visited families twice a week, 10 per cent once a week, 40 per cent twice a month, and 30 per cent once a month.
2. About 60 per cent of the tutors reported a very close relationship with learners and parents/families, and about 40 per cent said that the relationship was close enough.
3. About 60 per cent of the tutors observed that the guidance subject matter was accurate, while 40 per cent said that it was hard to implement.
4. As for the role of the tutor at the planning phase; about 30 per cent helped to determine the kind of income generating effort, 40 per cent helped to get the material resources and do the marketing survey, and 30 per cent helped to obtain loans.
5. As for the role of the tutor at the organizing phase, about 60 per cent helped to explain the job description, and about 40 per cent helped to share the job task.
6. As for the role of the tutors at the actuating phase; about 40 per cent helped with the finances, about 10 per cent helped in marketing, and about 50 per cent helped to support work morale.
7. As for the role of the tutor at the controlling phase; about 60 per cent provided alternative suggestions to solve problems, and about 40 per cent gave suggestions regarding the control results.



d. **Learning achievements:**

1. Around 14 per cent of the learners managed to attend 90 per cent or more of the learning sessions, and 86 per cent attended less than 90 per cent of the time.
2. Academic achievement will be measured at the end of September 2000.

## **B. Qualitative Results**

1. **Community participation:**

At the preliminary stage of the project, the participation of the target community was low. The tutors are empowered to increase the strength of this participation in stages.

2. **Continuing the project:**

The kinds of income generating efforts selected and implemented were very useful for the target community. In terms of poverty alleviation policy through out-of-school learning activities, this project was thought useful only for a short time.

3. **Co-ordination with other organizations:**

The double impact opened access to co-operation with other organizations.

4. **Curriculum:**

The national curriculum was used maximally.

5. **Resource people:**

The staff of SKB Cilandak served as technical resources, and other resource people came from the target community or from outside.

## **IV. Discussion**

### **A. Problems and Constraints**

1. **Problems**

- a. It is hard to accurately determine the most effective kind of income-generating effort required because the need for income is so urgent.
- b. It is hard to match Packet B learning activities with an income-generating programme in order for both to achieve the maximum results.
- c. There are many other programmes and activities with the same orientation but with a different approach, including charity activities.

2. **Constraints**

- a. The time period for action research implementation is too short, not allowing time enough especially for measuring academic achievement.
- b. There is not enough support provided to get optimal results from the programme implementation; for example, it should include a study of marketing.
- c. The frequent fluctuation in the rupiah's rate of exchange is not conducive for doing business.





## *B. Insights and Lessons Learned*

### 1. Programme formulation:

The programme is very efficient and effective viewed in terms of time and cost implementation, especially in regard to the change of curriculum and subject matter implemented.

### 2. Process:

The programme started with tutor orientation, and continued with identification and selection of the target candidates, and the implementation of teaching and learning activities, which were defined in terms of objective field conditions.

### 3. Targets:

The targets were learners and their parents or other family members. They were recruited from three Packet B learning groups with various backgrounds, which needed different treatments.

### 4. Kind of income-generating effort:

In the multidimensional crisis situation, these income-generating activities still revealed a certain potential. Thus this programme could be expanded or adopted for poverty alleviation efforts.

### 5. Programme costs:

Programme cost depends on the needs assessment of the target group, and whether the group is involved in helping to determine programme outputs. A revolving fund strategy is one possibility for implementation.

### 6. This study clearly shows that human resources can be developed through the out-of-school education approach.

### C. Conclusions

1. Programmes combining the education approach and the economic approach are very appropriate for increasing the quality of life amongst learners and their families.
2. A positive relationship between tutor, learner and parents is one of the key successes of the programme. Tutors have responsibility for teaching both in and out of class and also for giving assistance to learners and parents in managing the income generating programme. Learners have the responsibility to learn and help their parents manage this programme. Parents are responsible for managing the entire programme and for supporting their children as they learn.
3. The motivation of learners to learn increased (71-93%).
4. Parent motivation to support their children's learning activities increased gradually.
5. The tutor's assistance in academic learning activities and the income-generating programme is important for overall success.
6. Income-generating programme assistance was both technical and managerial. Technical assistance helped develop the skills of both learner and parent to their full potential. Managerial assistance consisted of planning, organizing, actuating and controlling, and included the *five Ms of management* (manpower, money, material, marketing, and maintenance).
7. The programme increased family incomes.

### D. Recommendations

The action research activity is not yet finished, but the quantitative and qualitative results have appeared. Thus, on the basis of these, we can make some recommendations:

1. In a crisis situation that hampers all economic effort, a Packet B programme of this type can be an alternative to a poverty alleviation programme.
2. This type of programme, which combines education and income generating, should be used as an appropriate model for other projects.





# SEAMEO INNOTECH's Philippine Project: Use and Effectiveness of NFE Accreditation and Equivalency Learning Materials

## I. Introduction

The dawning of the 21st century was welcomed by some 34 million Filipino children, the majority of whom are between the ages of 6 and 17. The Philippine National Development Plan for Children (PNDPC)<sup>6</sup> further estimates that *among the six-year olds, 95.26% will be enrolled in Grade 1 but only 69.51% of them will complete Grade 6. Their number will further dwindle to 66.24% in high school. Eventually, only 45.02% will graduate from high school.*

In the Philippines, many children come from rural and indigenous communities. The PNDPC further takes into account that *in 1998, 4,231 of these communities did not even have a single elementary school. An additional 2,509 communities had incomplete elementary schools. In 26 municipalities there were no secondary schools. The children in these communities travel some 2 kilometers just to reach the nearest school. For many children, the long trek had not been worth their time and effort.*

A survey by the Department of Youth, Culture and Sports a few years ago showed that 35 per cent or about 12,000 of the 34,081 existing elementary schools were incomplete. Added to this, the achievement level of elementary pupils in public schools was found to be far below the 75 per cent standard.

While elementary education is free and compulsory, 1990 survey figures reveal that 17 per cent or 2 million school-age children were outside the formal school system. Of the 43,000 *barangays* all over the country, 11,630 do not have elementary schools. A large number of the 2.8 million (1990) illiterate people are children who are not enrolled in school.

Indeed, problems plaguing the country's education system widen the disparities in opportunity and access to quality education. These problems are manifested in the lack, and sometimes even the absence, of school buildings and physical facilities, insufficient textbooks and learning resources, below average pupil performance and achievement levels, and the lack of school management and overall instructional effectiveness.

Even in communities where there are complete elementary schools, children still leave school. There are various reasons why they do. For some, school has become an extra chore that has no relevance to their own lives. In many instances, children are just too poor and too hungry to stay alert and attentive inside the classroom. Still others find school a strange and difficult world.

In order to address such education problems, a number of alternative approaches to formal learning have been developed. One such alternative to the highly institutionalized, chronologically graded and hierarchically structured formal education system is non-formal education.

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<sup>6</sup> The Philippine National Development Plan for Children (PNDPC), being prepared by the Council for the Welfare of Children, is meant to be a road map in setting priorities for action and the use of resources, and for the various sectors in Philippine society in their efforts to bring to life the Government's policy and commitment to work for the recognition and realization of the rights of children.

## *Non-formal education in the Philippines*

In the Philippines, non-formal education (NFE) is defined as any organized school-based educational activity undertaken by the Ministry of Education, Culture and Sports and other agencies aimed at attaining specific learning objectives for a particular clientele. This activity particularly targets illiterates and out-of-school youth and adults, and is distinct from and outside of the regular offerings of the formal school system. Non-formal education aims to improve the access of disadvantaged groups to basic and livelihood-related education and training. Its other aims are:

- To eradicate illiteracy and raise the level of functional literacy of the population
- Provide unemployed and underemployed youth and adults with appropriate vocational technical skills to enable them to become more productive and effective citizens
- To develop amongst the clientele the proper values and attitudes necessary for personal, community and national development

There are many government and non-government agencies that organize NFE activities/courses catering to various needs and interests of adult learners and out-of-school youth. In the Philippines, the Department of Education, Culture and Sports (DECS), Bureau of Non-formal Education (BNFE), is charged with this responsibility. There is a staff complement at the central and regional levels for NFE; a general education supervisor and assistant superintendent are in charge of NFE in the cities and provinces. However, there are no full-time NFE programme implementers at the grassroots level. There are only officially designated NFE co-ordinators and NFE teachers who attend to non-formal activities on a part-time basis.



## *The Non-formal Education Accreditation and Equivalency System Project*

A major non-formal education project of BNFE involves the development of the ***Non-formal Education Accreditation and Equivalency (NFE A&E) System***. The project is being funded by the Asian Development Bank and covers 24 provinces in 9 regions, selected on the basis of composite ratings consisting of the lowest functional literacy rates and the lowest elementary school participation rates. Since the inception of the project in 1995, it has now organized 283 classes in 47 *barangays* with 81.5 per cent of its learners having graduated from the non-formal education course.

At the same time, the project introduced institutional and staff capacity-building measures to enable DECS to better plan, co-ordinate, manage, monitor and evaluate its decentralized NFE programme.

The development of a curriculum framework specifically designed for the non-formal education clientele was a critical part of the project. A series of consultations, meetings and workshops with curriculum experts, resource writers and consultants from various DECS bureaus, centres and other agencies produced a curriculum specifically designed for non-formal education, emphasizing functionality and focusing on performance-based skills comparable to the formal system.

The curriculum covers three levels, namely basic literacy, elementary level and secondary level. It consists of five learning strands – Communication Skills, Problem-Solving and Critical Thinking, Sustainable Use of Resources/Productivity, Development of Self and A Sense of Community, and Expanding One's World Vision.

Major indicators under each learning strand are as follows:

### **Communication skills**

- ▶ Listening in the first and acquired language
- ▶ Speaking in at least two languages
- ▶ Reading written and multimedia materials
- ▶ Writing to express one's ideas and feelings clearly

### **Problem solving and critical thinking**

- ▶ Numeracy/mathematical skills
- ▶ Scientific thinking skills in daily life situations

### **Sustainable use of resources/productivity**

- ▶ Ability to earn a living as a self-employed person
- ▶ Ability to earn a living through employment
- ▶ Entrepreneurship
- ▶ Sustainable use of resources and appropriate technology
- ▶ Productivity

### **Development of self and a sense of community**

- ▶ Self-development
- ▶ Interpersonal relationships
- ▶ Personal and national identity
- ▶ Recognition and practice of civil and political rights and responsibilities

## Expanding one's world vision

- ▶ Knowledge, acceptance, appreciation of and respect for diversity
- ▶ Peace, and nonviolent resolution of conflicts
- ▶ Global awareness, interdependence and solidarity

The Project calls for the development of a programme built around this uniquely non-formal curriculum using a range of innovative learning strategies designed to break down traditional barriers of time, accessibility and resources, which make it difficult for out-of-school youth and adults to pursue or continue their education. Specifically, it calls for the development of self-instructional learning materials to enable learners to attain the curriculum competencies. It also calls for two national tests to be developed to ascertain and certify the comparability of adult learners' skills to those of elementary school and secondary school graduates. The plan of the Project calls for DECS to award non-formal elementary level certificates or secondary level certificates to adult learners or out-of-school young adults who pass each of these tests.

## *Development of the NFE A&E learning materials*

In the early part of 1998, SEAMEO INNOTECH was commissioned by the DECS BNFE to develop the non-formal education accreditation and equivalency learning materials based on the above-mentioned curriculum framework. The Center produced more than 150 learning modules including teachers' and learners' guides and 14 audio taped lessons at elementary and secondary learning levels.

The modules aim to help the learners improve their skills, knowledge and competencies across the five learning strands. By studying the modules and completing the various self-assessment activities and assignments, the learners will be able to better understand the problems of daily living and to make informed decisions about possible options to improve the quality of their lives. This includes having new skills and knowledge to raise their standard of living through better health practices, better food, increased income, improved family life and more direct participation in community and civic activities.

The modules are also meant to prepare the learners to sit for an NFE A&E test at either the elementary or secondary level. If they successfully complete the test, they will receive a certificate that can help them get jobs and pursue other learning opportunities.

Late last year, the BNFE started pilot-testing the materials in some of the areas identified under the project. One of these sites is the Sandiwaan Center for Learning.

The **objectives** of the study are:

1. To describe how the NFE A&E learning materials are being used by the learners and learning facilitators at the Sandiwaan Center for Learning (SCL).
2. To determine effects of the learning materials as well as the learning process under the NFE A&E learning system on the lives of the adult learners and out-of-school youth as shown by the following indicators:
  - a. differences between pre and post A&E test scores
  - b. changes in learners' ways and habits, or their way of life in general, after experiencing the NFE A&E learning system
3. To gather feedback on ways to improve the materials, as well as the planned process for their application.

## II. The Sandiwaan Center for Learning

The Sandiwaan Center for Learning was established to fill the urgent educational needs of scavenger families in Smokey Mountain and the surrounding squatter areas.

Smokey Mountain was a vast garbage dump in the heart of Metropolitan Manila. Twenty-five thousand people used to earn their living from the site by scavenging amongst the trash heaps. Even small children spent their waking hours picking up pieces of plastic, metal and paper to be sold for reuse or recycling in order to survive in the asphalt jungles of Manila.

In 1978, missionaries of the Society of the Divine Word started to organize and create Basic Christian communities at the dumpsite with a common mission to create solidarity with and amongst the poor. The missionaries helped in this apostolate of community organizing, community development, networking and co-ordinating with government and non-government organizations and the mobilization of people's organizations, on three levels, namely: spiritual, developmental and liberational. From this perspective, educational programmes and micro-enterprise development are integral components of the apostolate.

In 1987, the Parish of the Risen Christ in Smokey Mountain started a day care programme in co-operation with the Manila Department of Social Welfare. Every year, almost 400 children complete nursery and kindergarten education. In 1992, the parish also started a collaborative effort with the Polytechnic University of the Philippines' (PUP) Open University Program to begin vocational technical training courses in Smokey Mountain. PUP data reveal that 75 per cent of those who went through these courses are currently employed. Aside from these two programmes, the parish also helps hundreds of students to enroll in elementary schools, high schools and colleges through its scholarship programme.

In 1993, Fr. Benigno Beltran, SVD, initiated a linkage with the University of the Philippines in Diliman to start an adult literacy programme in Smokey Mountain. A survey was conducted and some preliminary orientations were held. In 1995, some 50 women were tested. Failure to make the learning modules more suited to the needs of the people made these initial attempts futile.

Now that the Government has rehabilitated the garbage dump and built housing units for the people, it is an even more pressing task to provide education for the former scavenger families so that they can earn enough to pay for the amortization of their housing units.

However, despite various attempts to address the educational needs of the community, the 1996 National Housing Authority survey of residents of the Smokey Mountain temporary housing site revealed that only 10.7 per cent of the residents had completed high school education. Barely 10 per cent of the population had finished college or vocational-technical courses. Obviously, a non-formal education programme that answers the pressing need for basic education was required to reach a massive number of people who have not completed high school.

The Sandiwaan Center for Learning has been managing learning groups for out-of-school youth and adults at Smokey Mountain and they are one of the first of the few that made use of the learning modules developed under the NFE A&E system.

### *The case study*

Against the foregoing background, SEAMEO INNOTECH conducted a case study on the use and effectiveness of the learning materials developed for the non-formal education accreditation and equivalency system specifically as implemented by the Sandiwaan Center for Learning. Initial implementation of the programme was undertaken from January to July 1999.

Specifically, the study tried to find out how the modules, together with the teacher and learner guides, have been used and whether the specified process for the use of such materials has been proven effective. The impact of the learning materials on the lives of the learners was likewise a point of interest for the study; this was documented and analyzed as far as time limitations of the study would permit.

The case study methodology was used for data gathering. Interview questionnaires were developed as data gathering instruments. Actual interviews with learners and learning facilitators, including key personnel of the SCL, were undertaken. These were supplemented by observations of actual learning sessions combined with examination and analysis of retrospective data. Examination of secondary sources included an analysis of how the learners were able to correctly respond to questions and perform other tasks (e.g., writing exercises) included in various parts of the learning modules. Self reports of learners as included in the monitoring and evaluation process of the SCL, as well as gathered through interviews, were also examined and recorded. Data gathering and analysis took place from May to August 2000.

## *Presentation of background information*

### **1. The Sandiwaan NFE A&E Learning System Instructional Managers and Learners**

#### *The instructional managers*

For the pilot implementation (covering the period January - July 1999) of the NFE A & E programme by the Sandiwaan Center for Learning, twenty facilitators were hired, including the five DECS-hired teachers of the Tuloy-Aral Program. Of the twenty instructional managers, only four (or 20%) are males. Many of the instructional managers are quite young with 70 per cent belonging to the age group 20-29. There are two instructional managers, however, who are over 50 years old.

To qualify, all instructional managers and facilitators must be graduates of a four-year course, preferably with educational units. Three-quarters of the instructional managers in Sandiwaan have a Bachelor's Degree in Education. For the pilot implementation of the programme, the Center gave priority to all applicants who lived in the Smokey Mountain community. In addition, the instructional managers attended a one-week seminar training given by DECS BNFE. The seminar proved to be very useful, especially for the other instructional managers who had little or no education.

#### *The learners*

For the pilot implementation of the A&E programme, there were 697 learners from the 1,000 targeted learners who joined the programme. Most of them were out-of-school youths who were very much interested in the programme. The number of learners, however, went down to 402 during the Center's second year of implementation covering the period September 1999 to May 2000. Instructional managers attributed this to the fact that many of the previous learners had found jobs to help earn extra income for their families. Others had simply lost interest.

The instructional managers also said that it was more difficult to hold social mobilization activities due to financial constraints. Social mobilization activities are usually undertaken to generate interest in the learning programmes of the SCL.

During the programme's first year of implementation, most of the learners were females (65%) as against only 35% males. For the second year of implementation, covering the period September 1999 to May 2000, the majority (59%) was male and 41% were females.

Learners' profiles indicate that most of the learners (82% during the first year of implementation and 89% during the second year) were between 15 and 24 years of age. There were nine learners during the first implementation and two learners during the second who were over 50 years old.

## 2. Planning and preparing for the NFE A&E Programme

### a. *Social mobilization*

To advocate the programme, an orientation meeting was conducted with the *barangay* education committee. Instructional managers after the training were assigned definite *barangays* or areas for them to visit and conduct orientation meetings. Since the Sandiwaan Center is located inside the Smokey Mountain temporary housing project of the Government, the out-of-school youth and adults of the community were really the targets of the programme. After conducting the survey, the staff of Sandiwaan scheduled a meeting with the building president after which enrollment took place at the Center.

### b. *Placement and screening*

#### ▶ Assessment of Basic Literacy

After enrollment, the learners were given a placement test. Elementary level learners were given the Assessment of Basic Literacy Test. This instrument was developed to evaluate the achievement of learners who completed a basic literacy programme. This also served as the entrance test for out-of-school youth and adults who wished to enroll in the lower elementary level of the NFE A&E programme.

#### ▶ Functional Literacy Test

All secondary level learners were given the Functional Literacy Test. This test aims to document adult non-formal learning that occurs in the context of the community. This also serves as a diagnostic test to determine the starting point of a learner who wishes to enter the secondary level.

### c. *Preparation of individual learning plans*

During counseling sessions, the instructional manager assisted the learners in preparing their individual learning plans. This included the learner's broad learning goals and specific learning objectives listed according to the objectives based on the five learning strands as follows:

1. Problem Solving and Critical Thinking (comparable to maths and science subjects in the formal school )
2. Communication Skills (Filipino and English)
3. Sustainable Use of Resources and Productivity (home economics)
4. Development of Self and Sense of Community (values education, social studies)
5. Expanding One's World Vision (innovations)

To help create their individual learning plans, learners completed an assessment form with the help of an instructional manager. On this form, different skills and competencies were listed based on the five learning strands. This way the instructional manager would be aware of the skills and competencies that the learner had already acquired during his or her stay in the formal school and it also helped the instructional manager to choose the right modules for the learner.

On the individual learning plan form, the learner wrote down his or her needs according to the five learning strands. He or she also indicated the amount of time needed to accomplish the objectives written in the plan.



### 3. Conducting the learning sessions

One of the primary responsibilities of the instructional manager is to schedule a regular learning group at the designated NFE A&E learning centre depending on the learners' demand. An instructional manager can hold sessions from 2-4-hours long with the learners. A maximum of 25 learners per learning group was allowed for each instructional manager.

Before each learning session, the instructional manager always prepared an activity to motivate the learners to discuss a particular module. During this period the instructional manager always practiced the *four As* of the adult experiential learning process:

Activity	-	Experience
Analysis	-	Processing
Abstraction	-	Generalization
Application	-	Practical application / trying out new skills

Because the programme provided a flexible way of learning for each session, the instructional manager, as the learning group leader, was encouraged to use a range of learning support strategies that also support the four As of adult learning. Traditional classroom learning or structured instruction is not commonly practised and is always supplemented by other learning strategies used during the sessions. These strategies were as follows:

- Structured classes – This strategy was the most appropriate for the learners at the elementary level where the instructional manager used the modules and the accompanying facilitator's guide to teach the class.
- Individual Tutorials – Learners who could not regularly attend sessions used the individual tutorial services. These sessions took place in the learning centre or in the learner's own home.
- Peer Learning Group Sessions – Here, the instructional manager encouraged and assisted learners to develop their own self-help study groups. This arrangement was convenient, especially for those who were using the same modules. The instructional manager would group these students and let them do some science experiments, or simply provide opportunities for learners to share their ideas and views on issues discussed in the modules.
- Demonstration Sessions – Certain competencies, particularly in the area of problem solving and critical thinking, required actual demonstration by the instructional manager. The learners then followed what the instructional manager had done, which resulted in more effective learning.

## III. Discussion and Analysis of Findings

### *Use of the learning modules*

Preparing individual learning plans for the students prior to using the modules is in line with the BNFE guidelines, which state that the modules chosen should fit individual learning needs. At Sandiwaan, after the learners completed their individual learning plans, the instructional manager then identified the modules that best suited the needs of the learners as identified in their plans. The instructional manager and the learner agreed on the number of modules to be read and studied by the learner. Initially, modules were limited to around two to three per person to enable learners to become familiar with them and to give the learners confidence in using them.

For each module, the learners undertook a module pretest. This test determined what the learner already knew about the material covered in the module. It also served as a basis for evaluating how much the



learner had learned from the module when he/she took the posttest that was also included in each module. How the learner performed on the tests also provided the basis for determining if he/she could progress to the next level of difficulty.

In addition to these two tests, the instructional manager also developed formative tests based on a random selection of the modules' pre- and posttest items.

As learners went through the programme, they were encouraged to collect materials that often served as evidence of their own learning and progress. These materials included records of module assignments completed, module pretest and posttest results, writing exercises, journals, letters, quizzes and assessment test results.

### *Most frequently used modules*

Based on the individual learning plans of the learners, the most frequently identified and used modules were those that could help them to develop problem-solving and critical thinking skills. Next were modules that dealt with the proper use of resources and how to increase productivity.

The modules most used by the out-of-school youths were those that focused on developing their ability in numeracy; while adult learners preferred modules that provided lessons on how to manage small businesses.

A summary of the distribution of learners according to the learning strands shows that Problem Solving and Critical Thinking including numeracy skills ranked the highest (72%) amongst learning strands, one that the learners were most interested in and which they felt they needed to know more about. Next in popularity was Use of Resources and Productivity (70%), followed by the modules on Development of Self and Sense of Community (67%). Communication Skills (57%), which included listening, speaking and reading

skills, came fourth. The least used modules were those on Expanding One's World Vision (20%). Modules under the strands Communication Skills and Expanding One's World Vision did not prove interesting or were deemed unimportant, maybe even irrelevant, to learners.

### *Problems identified in module use and how these were addressed*

The interviews with learners and instructional managers made it clear that the recommended procedures for using the modules were not exactly followed. According to these guidelines, the learners should have studied all of the modules that the instructional managers had arranged according to the level of difficulty of each module's exercises. Similarly, the recommended number of hours for study was not observed. For instance, 200 hours is the recommended time allotted for finishing all modules at the elementary level; with 90 hours for sessions with the instructional manager, 85 hours for exercises and activities assigned under various topics discussed in the modules, and 25 hours for self-study or studying without supervision. The recommended number of hours for studying each module is from two to three. Inasmuch as many learners could only accommodate the programme in terms of how much time they could spare outside of their duties and work at home, the SCL had to adjust to their schedules.

Other constraints that made it difficult for learners and instructional managers to comply with the recommended system for module use included 1) a limited number and availability of modules, 2) impractical assignments for the learners, and 3) a lack of depth in discussing and explaining some issues and problems covered in the various lessons. These were addressed in the following ways.

1. The Sandiwaan Center for Learning was given only one set of NFE A&E modules. This set was used by 607 learners during the pilot implementation and by 402 learners during the second year of the project. As these proved to be inadequate, the Center had to photocopy the modules, especially those that were used intensively by the learners. While this may prove a satisfactory alternative in the short term, the instructional managers preferred having the learners use original printed copies of the modules, as they felt that learners are more motivated to study if their learning materials are more appealing.

In addition, modules are often supplemented by other learning materials developed, and sometimes even bought, by the instructional managers. The additional learning materials usually came in the form of books, newspapers, magazines, maps and even video tapes. Learning tools such as charts, tables, illustrations and pictures were also provided by instructional managers to further illustrate topics and ideas found in the modules. Learners were also given access to reference materials found in Sandiwaan's Resource Center.

2. Both instructional managers and learners reacted negatively to some of the exercises called for in the modules. Some of these exercises, according to them, were impractical and very difficult for learners to follow. Examples were those asking learners to go to various establishments or offices and obtain certain data or information requested in the modules. The instructional managers said these were hard to do because they called for other skills (e.g., communication skills) that the learners had yet to master.

Resource constraint was also another barrier that learners had to hurdle in doing module exercises and assignments. Even the simple act of getting information from newspapers became a big challenge, as learners often did not have papers at home because they could not afford to buy them.

To address this problem, instructional managers often found that they would have to think of alternative exercises that they could ask the learners to do. This made their work doubly difficult, because aside from their functions as facilitators, they had to make sure that their alternative exercises and assignments fully addressed the objectives of the original exercises found in the modules.

3. Instructional managers found that many lessons covered in the modules were not really discussed thoroughly or in depth. Explanations were often insufficient for the subjects covered in the modules. Not enough information was contained in the lessons and sometimes questions in the test areas were not satisfactorily answered based on data or information provided.

Other reference materials provided by the teachers helped augment information and data found in the modules. In addition, resource people were sometimes invited to provide deeper insights into topics and issues found in the learning modules.

## Learner Achievements

### *Pretest and posttest results*

At the broadest level, the pretest and posttest results showed that the lessons did not add to the knowledge and skills of most learners. A comparison of learners' pretest and posttest scores indicated that fewer than 50 per cent of the learners showed an increase in their posttest scores. One-third showed no change at all while two out of ten had even decreased their posttest scores.

Thus, across the five learning strands, the majority of the learners (53%) who went through the various modules had the same or lower scores in their posttests as in their pretests.

Several factors can explain this rather unfortunate outcome. There might be inadequacies in the validity of both tests. To what extent have the pretests adequately and reliably measured the learners' prior knowledge? In the same manner, how much have the posttests adequately and reliably assessed what the learners actually learned from the lessons?

To some extent, we can get a sense of the validity of the tests from the type and length of these tests. Many contain true-or-false items; there are some with fill-in-the-blank type of questions. The majority of modules only have a 10-item pretest and a 10-item posttest. It is possible that the learners knew far more than what the pretests and posttests asked of them.

If indeed many of the modules were difficult for self-learning, the role of the facilitators becomes even more critical. But support for facilitators is inadequate. In many instances, they find that they even have to supplement the modules with other learning materials, some of which they often have to provide themselves, to enable learners to better understand topics discussed in the modules.

There have certainly been difficult modules used in the A&E scheme. Irene Bonode, one of the young facilitators at Sandiwaan, said that many learners have problems with the mathematics modules, a problem not exactly unique to the non-formal education sector. She said modules on fractions and one that explains how to compute monthly electricity bills proved daunting to many learners, regardless of age.

In regard to learner achievement in modules on communication skills, 41 learners completed the communication arts modules under this second least popular learning strand. More than half of them (56%) got a higher percentage of correct answers in their posttest than in their pretest. Compared to the other learning strands, pretest-posttest comparisons here registered the least decline in test performance.

In regard to learner achievement in problem solving and critical thinking, a much higher number of learners went through the modules under this learning strand. Of the 133 learners who did so, 42 per cent had increased their scores in the posttest. However, more than a third did not show any improvement at all.

Modules on the sustainable use of resources and productivity were used by 140 learners. While almost one-third of them got the same percentage of correct answers in their posttest as in their pretest, 46 per cent showed a better performance.

More than half of the 139 learners who studied modules under the learning strand *Development of Self and Sense of Community* fared better in their posttest compared to their pretest. Next to *Communication Skills*, this learning strand ranked second in terms of the percentage of learners who showed learning gains in their end-of-module evaluation.

Modules under the learning strand *Expanding One's World Vision* were used by 125 learners. While more than a third of them did not seem to have learned anything from the lessons, still a higher proportion (43%) scored higher on their posttest than on their pretest.

### *How the NFE A&E programme has improved the lives of its learners*

According to the in-depth case studies done on some of the learners, the four most common reasons given by learners for dropping out from the formal school system and joining the NFE A&E programme are poverty, family problems, lack of flexibility in the structured system, and too many assignments.

The following were the most commonly cited goals of learners for attending the NFE A&E programme: to gain recognition/certificate, to continue education in the formal system, to be able to enter the world of work, and to be able to establish their own business. A number of these learners have in fact set up businesses and are well on their way to building more secure and better lives.

Aside from gaining practical knowledge and skills, which many of the learners considered important for their everyday lives (computing and numeracy skills, how to start their own business, how to form a co-operative, and practical tips on health and nutrition), many learners gained self-confidence and a sense of self worth. Many realized the importance of education and a few were drawn away from previous bad habits like drug addiction when they joined the programme. Even for those who failed to pass the accreditation test, the experience still opened doors of opportunity for many learners, as they feel that they are now more in control of their destinies and their futures.

## IV. Suggested Programme and Module Improvements

A number of suggestions on how to improve the modules as well as their use have been derived from interviews with both the instructional managers and the learners, as well as from actual observations made during the learning sessions.

- a. Increase the number of modules made available to the learning centres and supplement these with additional learning materials that the instructional managers and the learners can use. As previously mentioned, while photocopying the modules may prove to be a satisfactory alternative in the short term, using original copies of the modules is actually preferred by many learners as these are understandably easier to read than the duplicated copies and are therefore more appealing to learners. Adding more colours to the modules has also been suggested by both instructional managers and learners.

Module supplements should also come as a part of the learning package because often instructional managers are economically constrained and find it hard to provide these additional materials, which learners need to increase their understanding of the topics discussed in the modules. These supplementary materials may cut across various modules, which means that they may be used not just

for one but for a number of modules that have similar or related topics. Examples of such materials are maps and dictionaries.

- b. Review and modify the assignments and exercises included in the modules to make them more practical and easier for the learners. Changes must also be made to ensure that the exercises build upon the skills that are developed through previous exercises that the learners do.

Exercises and assignments must also consider the resources required to complete them. Many of the NFE centres lack the resources to provide their learners with the necessary gadgets and equipment for them to do the exercises called for in the modules.

- c. Revise some of the modules to include more thorough discussions of the topics they cover. At the Sandiwaan Learning Center, the instructional managers found that many lessons covered in the modules were not really discussed thoroughly and in depth. In addition, not enough information was included to even satisfactorily answer test questions included in the modules. Inclusion of supplementary learning materials may help address this inadequacy. Also, a roster of resource persons in or outside of the Bureau of Non-formal Education, which the learning centres and their instructional managers may freely tap, would significantly bridge the information gap that the modules may fail to address.

In its second year of project implementation, only 12 per cent of the total test-takers from the Sandiwaan Center for Learning have passed the DECS Accreditation Test. While this may not present a very good picture in terms of the effectiveness of the programme or the learning modules, it should not be the sole gauge of the impact of the programme on those who took part in it. There are numerous success stories documented for learners at the Sandiwaan Learning Center. Many of those who were accredited are now enrolled in the Open University of the Polytechnic University of the Philippines, which has a joint distance education programme with the Sandiwaan Center.

The potential of the NFE A&E programme to significantly impact the lives of the nation's out-of-school youth and adults is enormous and continuous effort must be exerted to fully realize this potential.



# The Community Store Project: An Innovative Approach to NFE for Sustainable Development in Thai Rural Communities

## I. Introduction

When the economic crisis began in 1997, it had severe effects on all 62 million Thais. Various problems in the economy, society, politics and education have continuously occurred up to the present. In the past three years, the Government has tried to adjust its policies, development plans and measures in order to lessen these problems and remove the stumbling blocks to national development. However, many problems have been deeply resistant to solution. In addition, the deterioration of social, ethical and cultural values has worsened the situation and inevitably has affected the organization of education. The National Council of Education reported in 1998 that the crisis caused many students to stop their further education. That year the number of students dropped from 12.9 million to 12.7 million, while the number of learners in non-formal education declined from 4.5 million to 3.6 million. At first glance, things would appear normal, as education up to Grade 9 is provided free to all. However, the economic situation prevents the Ministry of Education from receiving its allocated budget. Solutions to the problems have to be based on new strategies and innovations. The situation is even more urgent for non-formal education (NFE) because it is more vulnerable to unstable factors than formal schooling.

### *NFE for sustainable development*

NFE refers to a process of developing human resources that is flexible in terms of objectives, forms, means, duration and evaluation. The content and curriculum have to be suitable for addressing each target group's problems and needs (Item 15, Section 3 [Education System], National Education Law, 1997). This specification requires educators to organize educational activities, both general and vocational, in various forms to suit each specific group. In times of great change, it is essential that NFE be in harmony with sustainable development and the Thai way of life. The NFE philosophy urges people to think and act wisely in solving their own problems and undertaking decent vocations to advance themselves as well as the community.

### *An innovative approach to NFE*

One recent innovative approach to NFE in Thailand uses community stores affiliated with community learning centres (CLCs) as the setting for learning and as an instrument for improving community economic life. This approach involves the joint effort of both government agencies and non-government organizations. In this case, the Department of Internal Trading, Ministry of Commerce, devises means and strategies for sub-district administrative organizations (SAOs) to set up the stores. The Department of Non-formal Education (DNFE) works collaboratively with the SAOs by co-ordinating the project and providing support for education activities.





## II. The Case Study

This innovative approach to NFE was tried out in communities located in U-Thong District, Suphanburi Province. This district, only about 100 kilometres from Bangkok, in terms of its geographical, economic and social conditions is representative of central Thailand. Farmers constitute most of the population in the province. An initial study revealed that a large proportion of the working age population wanted to continue their lower and upper level secondary education at non-formal education centres. These learners work in the agriculture processing industry, but the factories are small or medium sized. Most of the learners are from the local population and have a strong attachment to the community.

The socio-economic problems of the past three years have resulted in lower incomes for farmers. Most prices for agricultural products are low. In addition, farmers are unemployed after the harvest season. However, the people of Suphanburi have an edge over others in matters of communication. The roads and other infrastructure in this province are far better than in other provinces of central Thailand. Thus Suphanburi residents have more access to innovations and technologies. Moreover, the government sectors in this province are keen to improve education services at the community level.

The major target groups for the project were learners at lower and upper secondary education levels, and community leaders such as SDAO members, members of housewife groups, farming leaders and community learning centre (CLC) facilitators. The DNFE has delegated the Centre for Educational Technology (CET) to co-ordinate with the Suphanburi NFE Centre. Being part of Suphanburi, the U-Thong District Non-formal Education Service Centre (UDNFESC) was selected as the location for the trial. UDNFESC in turn chose Don Kaa and Ban Kong Community Learning Centres as sites for the project.

In addition to the full-fledged co-operation of the administrators of UDNFESC, the two CLC facilitators, who played an instrumental role in enriching the learners' knowledge, also helped to co-ordinate efforts at all

levels. They really gave up their time and energy to the activities of the community stores of the two CLCs. It should be mentioned also that the two places were selected because of the suitability of their locations, buildings and surroundings, as judged by the representatives of the Department of Internal Trading from Bangkok as well as its branch representatives in Suphanburi. The stores were large enough to store consumer goods and were readily accessible to customers.

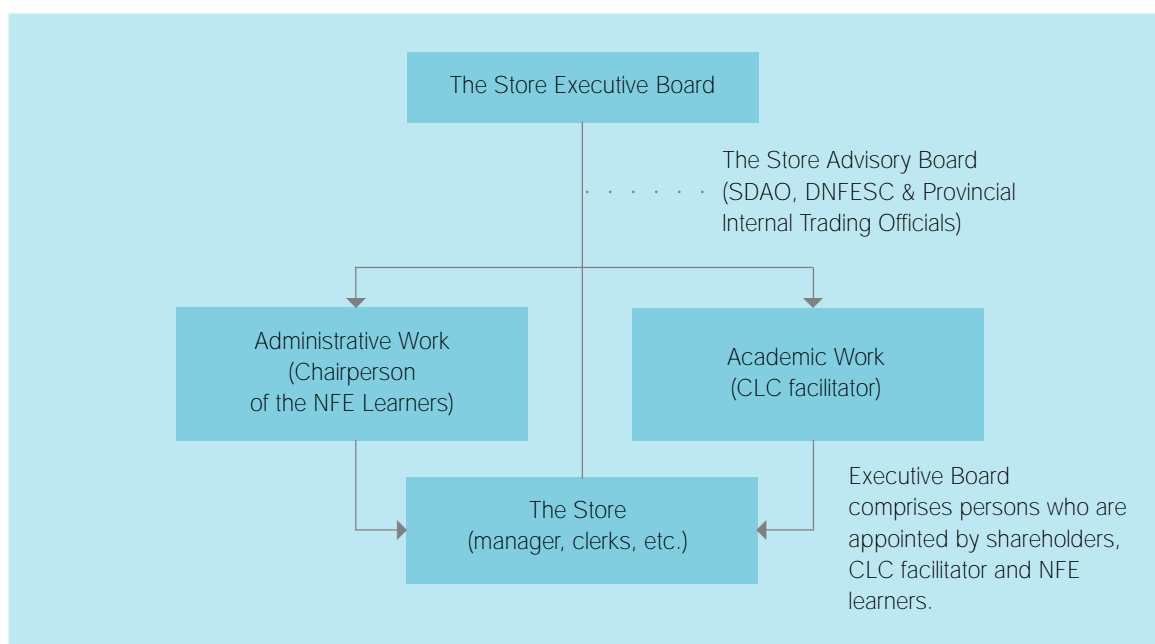
### Objectives of the study

Its major objective was to search for strategies to build up the community's strengths through NFE activities leading to sustainable development. Many projects in the past had created conflicts amongst community members and damaged local institutions such as the family, religion, culture and even the environment. Thinkers of many countries are calling for the resurrection of the community as a fundamental basis for national development. The Thai education reform clearly specifies power sharing for education management amongst the family, community and organizations within the community, which is stated clearly in Item 29, Section 4, of the National Education Law.

The specific objective of this project was to propagate knowledge and develop skills in the management of small community stores, enabling community members to understand principles of trade. The members pooled their resources. They accumulated knowledge related to running a store. They were trained in accountancy and stock keeping. The content and activities of NFE were geared toward vocational skills as well as generating income for community members. The project not only contributed to solving the community's economic problems; it also helped improve the quality of life. This is simply because all products in the community's stores were of good quality and sold at reasonable prices. Thus the stores helped protect their customers from being cheated by unscrupulous merchants.

### III. Operational Model and Learning Innovations

The operational model for the community store was an outcome of the policy-level administrators' meeting concerning CLCs. The administrators wanted to develop NFE programmes to benefit more people and secure greater participation. The model is shown below:



The *Store Advisory Board* consists of 1) members of the sub-district administrative organization (SDAO); 2) administrators from the District NFE Service Centre (DNFESC); and 3) officials from the provincial Internal Trading Department.

The *Administrative Work Section* is headed by the chairperson of the NFE learners for that particular year or elected by the members of the store's Executive Board. This section is responsible for overall management of the store, especially in regard to ordering and stocking goods.

The *Academic Work Section* is chaired by the CLC facilitator. This section is responsible for receiving and disbursing money, checking the store accounts, pricing, serving as intermediary in buying and selling, encouraging people to patronize the store, and rotating learners through the various posts (manager, clerk, etc.) so that everyone has some experience of the different jobs.

The *Community Store Manager* must be a registered NFE learner approved by the CLC facilitator. This person is responsible for co-ordinating the work of the store's employees, overseeing financial and accounting matters, supervising community marketing activities and reporting the results of the store's activities.



### *Learning innovations*

Each CLC offers a variety of NFE activities. These include vocational skills training, informal learning from radio programmes and videos, supplementary tutoring for basic education, and quality of life (QL) activities. The latter have become important in all NFE programmes and at all levels. These activities enable learners to build self-respect and to work with others as a group. They include 1) religious and cultural activities, 2) social and community development activities, and 3) activities that promote NFE, such as literacy campaigns.

The Community Store Project, involving co-operation between the DNFE and the Department of Internal Trading, provides learners at CLCs with an opportunity to participate in QL activities related to operating

small trading stores for the benefit of the local community. Participation in the project is an option available to any CLC learner who wishes to acquire the skills needed in running a small goods shop. After registering for the project, they receive training in the basic principles of store operation, which include management and basic accounting. In addition, the CLC gives them information on drug addiction and ways to prevent it.

The learners take up posts in the store according to their interests and aptitudes. They receive skill training and credits according to the following criteria: 1) manager – 1-2 weeks, 42/48 units/credits; 2) clerks and others – 3-6 units/credits per day. The training follows the standard in the NFE curriculum, which requires both theoretical study and practical work.

## IV. Project Operation

### *Initial planning*

The idea of setting up a store in a small community as a tool for training NFE learners is quite new to many government and non-government organizations, including the two agencies responsible for this project, the DNFE and the Department of Internal Trading (DIT). Initially, administrators at the main offices of both departments met twice to consider the rules and regulations of the two agencies regarding the relevant content of the NFE curriculum and capital to support community stores. They also discussed proposals to set up these stores and considered possible sites for piloting.

Subsequently, DNFE and DIT brought in the concerned organizations at the provincial and district levels, namely the Suphanburi Internal Trading Department (SITD), Suphanburi NFE Provincial Centre (SNFEPC) and U-Thong District NFE Service Centre, all of which showed their readiness to participate. The administrators at the central offices met again, this time to identify steps and procedures in working together with officials at provincial and district levels and with the CLCs.

The third meeting was held in Suphanburi. The Deputy Director General of DIT, the Director of CET and staff met officials from the Suphanburi NFE provincial centre and Suphanburi ITD. After reaching agreement on basic principles, all parties visited the proposed experimental sites in the two sub-districts. There was a meeting with the leaders of the two communities. They were members of the SDAOs and the women's groups who pledged full support by joining the store executive boards, publicizing the project; and pooling shares at the initial stage. The community leaders were extremely interested and willing to participate. CLC facilitators and NFE learners would operate the community stores, which would be open for business within one or two months' time.

### *Preparing the community stores*

After officials from the two agencies at both provincial and local levels came up with the operational model for the project described above, they had to prepare the communities involved in the project. Thus the field staff had to co-ordinate with the community leaders and the NFE learners so that they would thoroughly understand the rules and regulations of the DIT as related to the project. The preparation of the store sites and co-ordination by the field staff took approximately one month.

### *Recruiting members and raising capital*

The administrators of the U-Thong District NFE Service Centre, Don Kaa and Ban Kong Sub-district leaders, CLC facilitators and NFE volunteer-teachers helped each other to recruit new members (shareholders) for

the community stores in Don Kaa and Ban Kong. They also explained to NFE learners the principles behind community stores so that they could set up their own stores later on. As recruitment of the new members had a clear purpose and means and helped generate finances to circulate within the community, these tasks were successful in a matter of two to three weeks.

### *Requests for funding from DIT*

Although the appointments of executive boards and resource pooling within the CLCs took place relatively rapidly, the presentations of proposals for the two community stores proceeded rather slowly. This is because the first proposals lacked the needed information. In effect, the proposals were returned by the DIT. The stores themselves had to make some corrections concerning the projects. The whole process took approximately two months for approval.

### *General meeting for board members and NFE learners*

The responsible staff from the central offices of DNFE and DIT had prepared documents containing information on store administration, management and methods of accounting. Then they arranged a meeting for the board members of the stores, the CLC facilitators and the NFE learners explaining everything they needed to know about the community stores and how to make them a success.

### *Opening day at last*

The DIT of the Ministry of Commerce made available a 30,000 baht support fund to each community store through the provincial office. The executive board had to choose wholesalers and obtain goods from the distributors in the province. Then they bought the goods for 30,000 baht in a single purchase. Once the goods were delivered, they were inventoried and put on the shelves for sale. When the shelves were full, the stores were open for business.

### *Supervision and follow-up*

The administrators from central and provincial levels, together with the officials involved locally, have continuously supervised and followed up on the activities of the stores, perhaps once every two weeks, since their inception. They have given advice, helped solve problems and followed up on events generally. The administrators also produced a television film, *Learning Outside the Fences*. The two community stores provided the setting. This film highlighted NFE innovations for sustainable development with a view to strengthening local communities.

### *Training to develop knowledge and skills to operate community stores*

During supervision and follow-up, officials learned that the members of the executive boards and the store staff had encountered a number of problems. Most important, they lacked the knowledge and skills needed to run a store; they could not set up and manage trading accounts; nor could they control and check stock. Therefore, DNFE again contacted DIT in order to organize intensive training. Resource persons from the central and provincial offices offered a single day of training, which took place at the U-Thong District NFE Service Centre.



## A study of the community store operations

The case study model was used to examine operations at the two experimental sites, Don Kaa CLC and Ban Kong CLC in U-Thong District, Suphanburi.

The study focused on 1) the results of the store operations involving the co-operation and participation of community members, particularly community leaders, NFE learners and members (shareholders) of the stores; 2) the knowledge and skills acquired by NFE learners who worked in the stores; and 3) community success in conducting business-oriented activities.

### Sample Groups:

1. NFE learners at Don Kaa CLC	23
2. NFE learners at Ban Kong CLC	37
3. Executive board members	30
4. CLC facilitators	2
Total	102

Duration: 4 months



## V. Results of the Study

The results of the operation of community stores can be summarized as follows:

### 1. Ban Kong CLC

Considering the operational results compiled by the executive board, it appears that the project was a success. This was because the participants had received co-operation and assistance from community leaders and the agencies concerned. A large number of NFE learners joined the project. The community store was run continuously. Each day there were two or three NFE learners working at the store. It was open every day. In addition, it sold goods on behalf of the village housewives group.

The Ban Kong CLC encouraged the NFE learners to take up the community store activity as their QL subject in the NFE curriculum. They responded that they were quite satisfied with it because it had made them gain knowledge and skills related to managing a store, doing accounts, serving customers, locating and stocking goods, and other related tasks. They could take it up as a future vocation. Additionally they had the convenience of buying things at cheap and fair prices, and received small sums as a dividend from their shareholding.

### 2. Don Kaa CLC

This enterprise was not as successful as it should have been. There was less co-operation amongst its members, and an already existing shop sold similar goods at cheaper prices. In the matter of administration, the executive board members still lacked knowledge in running a store, specifically in the management of trade and how to deal with the community leaders, i.e., the SDAO members. Additionally, the procedures in requesting assistance from the DIT were rather complicated. They caused the staff of the community store to be discouraged and *burned out*. In actuality, the CLC facilitator was the store's regular salesperson,

and NFE learners helped only two days per week. Thus the entire workload virtually fell on the shoulders of the facilitator. So it is understandable that he could not do the job better.

The NFE learners who had chosen the community store as their QL. subject responded that they had acquired knowledge and skills in keeping accounts, serving customers, and overall management. Besides receiving knowledge, they had the convenience of buying goods at cheap and fair prices, and received small sums as a dividend from their shares in the enterprise.

## Conclusions

From the results of the case study, we see that the community store treated as a Quality of Life (QL) activity according to the NFE curriculum is able to strengthen the community in many ways and can contribute to ongoing development efforts. The success of the community store depends on the following:

1. The participation of community members. Community leaders such as the *kamnan* (sub-district chief), *phu yai baan* (village chief), the head of the village housewives group, and other respected persons and NFE learners in the community should serve on the executive board of the store. This will foster a sense of belonging and ensure the ongoing operation of the enterprise.
2. The joint pooling of resources from members. Those who are willing to jointly invest in the enterprise will understand that they will benefit in the form of a periodic dividend. Thus they will be encouraged to buy more goods from their own store. In effect, the chain reaction increases the funds in circulation and causes the store to thrive.
3. Support from district organizations and government services. This includes assistance from education agencies such as the district NFE service centre who sent in a CLC facilitator to help operations, as well as help from the SDAO, the Sub-district Agricultural Technology Transfer Centre and community development groups.
4. An opportunity to strengthen essential traits of the Thai character. Working as a single team, the executive board members and the NFE learners have made the Community Store Project a success. When problems were encountered, they helped one another to solve them. In addition, the project helped the learners to acquire responsible work habits. They had to take on the duties of manager, accountant, and clerk during the store operations. Some even had to stick to the duty of opening and closing the store at exactly the specified times. These work habits not only contributed to the successful operation of the individual stores, but would be valuable for future community development efforts as well.





# Australia's Farmers Plan for Sustainability and Growth: Innovative Approaches to Adult Lifelong Learning

## I. Introduction

### *Background to the study*

An innovative education programme aimed at improving Queensland farmers' skills in strategic business planning was selected as the focus of study. Using an evaluative case study approach, we found that the success of this educational initiative lies in its purposeful engagement of farm management teams in the process of learning as a means to develop their skills, effect social change, and facilitate community participation and action in ongoing formal and non-formal adult education programmes. The findings also confirmed that the success of the programme is due to the grounding of all elements of the educational initiative within a framework of educational theory and practice.

The following factors have had major impacts on farm production, the environment, and the people living and working as family units on Australia's farms:

- the process of economic globalization
- a growing ecological crisis
- shifts in government policy in relation to management of risk (drought), ecological sustainability, rural adjustment, and rural and agricultural restructuring
- the age structure and mobility of rural populations
- changing patterns of work and employment on farms and in rural towns
- changes in market trends (new demands for products and product variety, competitive pricing and standards of quality)
- changed patterns of investment in agriculture
- the rapid development of science and technology and its application to all areas of primary production
- a decade of severe drought affecting large areas of Australia's eastern states

In real terms these factors have led to severe fiscal hardship for many farmers, graziers and their families, and placed relentless pressure on the profitability of existing rural operations.

The findings of our investigation suggest that the engagement of farmers and farm family units in Futureprofit's strategic business planning (Integrated Workshop Series) and the additional, more in-depth workshops offered as part of the Futureprofit programme have had an important educational and social role to play in helping Australia's farmers confront and manage change successfully.

### *The national context – a climate for change*

The national Property Management Planning (PMP) Campaign, incorporating farm business management training, was identified by the Federal Government and the National Farmers Federation as an effective approach to assist farmers in addressing risk management problems and producing sustainable and viable farm businesses. Following further discussions held between state and federal ministers and the



announcement of a detailed framework for the operation of a national drought policy, the PMP Campaign was launched in August 1992.

The term *extension services*, in this context, is best described as the provision of practical advice to farmers and graziers on technical or production related matters. Extension officers take the results of research findings in their field of scientific expertise and provide practical advice to farmers on how to apply this knowledge to their farm or farm produce. Whereas in preceding decades technical extension services were supplied as a direct output of information to farmers, the new paradigm in extension services evolving from these national policy decisions requires farmers to take a more significant role and responsibility for contributing to improved farm management practices. At the same time, farmers should have more control over the information they need and want and over the way this information is delivered.

The first four years of the PMP Campaign (1992-93, 1996-97) were developmental, characterized by different states and territories adopting different approaches to the way learning opportunities were provided for their farmers. However, when a prime ministerial task force reviewed the PMP Campaign in 1994, it recommended that the campaign be expanded and extended with an emphasis on delivery of the workshop courses and an integrated workshop planning approach. This decision was based on findings that higher level learning outcomes could be achieved by adopting a workshop-series approach similar to the programme being offered in South Australia.

In 1996 the second stage of PMP was endorsed, and in 1998 this was followed up by a national evaluation of the PMP Campaign. The final report concluded that the PMP programme was flexible, responsive, dynamic and relevant, and that its cost was fully justified. The second stage of the PMP provided an opportunity for each state and territory to market its statewide PMP programme under its own distinctive name. In Queensland, PMP is delivered through a number of regional projects.

### *Development of PMP in Queensland*

PMP in Queensland evolved from a series of one-off workshops to include a core series of workshops covering the four areas of PMP – human and natural resources, enterprises, financial resourcing and marketing. Stage II of the campaign started in July 1996, immediately following Stage I, and was re-launched under the new name Futureprofit on 4 June 1997. Futureprofit consists of a suite of educational

products and services. Futureprofit aims to provide farmers, graziers and their families with improved decision making and planning skills that lead to:

- better business decisions because of the ability to balance long-term goals with short-term needs
  - positive management of change, in market, climate, or government policy or regulations
  - more effective negotiations with banks, suppliers, agents, family members, staff and others
  - improved family relationships, by developing a shared vision and realistic succession plan
- (Futureprofit URL: <<http://www.dpi.qld.gov.au>>)

This case study describes the strengths of the Futureprofit programme, as a best practices model of adult education that supports the principles of adult lifelong learning.

## II. Presentation and Analysis of Findings

### Survey results

This section provides a synopsis of findings related to each of the research questions.

#### 1. *Do all aspects of the education initiative respect the needs of adult learners? How?*

The Integrated Workshop Series Model is used consistently across all Futureprofit workshops and activities. The structural elements of the model are underscored by four characteristics, all of which must be present for the outcomes discussed further in this section to be realized.

- |   |   |                  |
|---|---|------------------|
| a. Whole systems (at farm level)        | } | <i>Structure</i> |
| b. Farm scale.                          |   |                  |
| c. Strategic planning/action learning   | } | <i>Process</i>   |
| d. Adult learning/facilitative learning |   |                  |

#### a. **Whole systems**

There are three key features of the PMP structure:

- ▶ Good adult learning programmes are always structured to meet the needs and preferences of the learners.
- ▶ Adults need to have a reason to learn before they are motivated to learn.
- ▶ Potent motivational tools guide learners to discover for themselves the gaps between where they are now and where they wish to be.

Farm families participating in the programme are offered workshops on topics ranging from mapping a property's physical resources to transferring the family farm to the next generation. These workshops are developed locally according to locally identified needs and to suit local conditions.

In addition to meeting the immediate needs of those attending, the workshops provide a re-introduction to learning in a safe, positive environment for people who may not have participated in learning activities for some time.

The aim is for people to adopt the disciplined approach to strategic planning, learned through their participation in the workshop series, to their ongoing lives and property management. In doing so, the participants are using a process, similar to action learning, that constantly allows for review and improvement of their performance.

## b. Farm scale

All activities are based on the concept of farmers and graziers developing a business plan for themselves, their families and their enterprises. Farming and grazing enterprises are dominated by family and family partnerships probably more than any other small to medium-sized enterprise in Australia.

Most extension staff have traditionally dealt with the eldest male in the farm family even though they recognize that management decisions are often made by this person's wife.

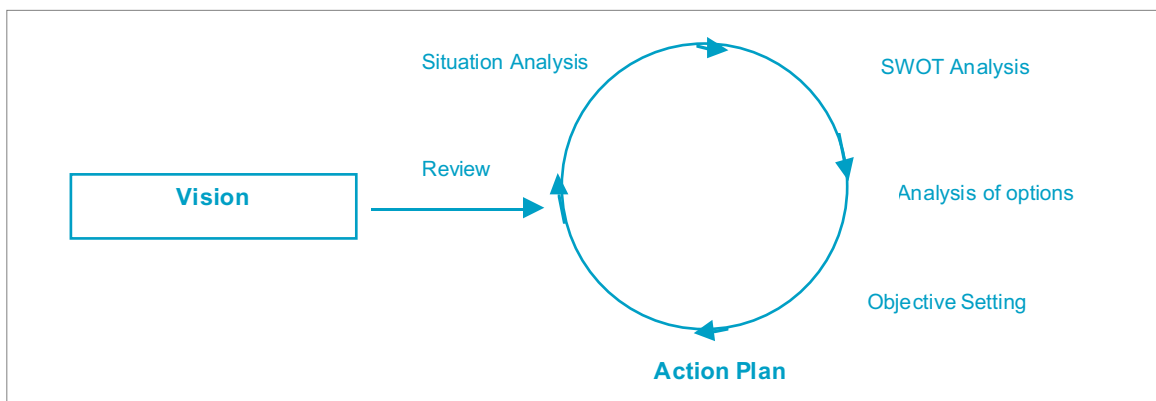
The findings from a recent government commissioned research project (*Missed Opportunities of Women in Australian Agriculture, 1997-1998*) confirmed the substantial role women play in agriculture. Specifically, researchers found that 32 per cent of Australia's farm workforce were female and that more than 70,000 women define themselves as farmers or farm managers.

These findings mean that farm interventions must involve the entire management team (which in most cases is the family). This involvement in the planning process may serve to pinpoint communication issues that have a negative impact on the growth of the enterprise.

## c. Strategic planning/action learning

The PMP programme supports active individual participation and group participation in both strategic planning and in the learning process. The following diagram provides a model of the planning cycle used as the basis of all PMP activities.

*Figure 1: PMP Strategic Management Cycle*



The participants in the Integrated Workshop Series are influenced by the following characteristics of action learning:

- ▶ a continual process of learning
- ▶ support by family members, colleagues and peers
- ▶ work on real problems
- ▶ reflection on their own experiences
- ▶ encouragement of a proactive stance to life

## d. Adult learning/facilitative learning

The approach to training or teaching taken in delivering the workshop series is consistent with the policy directives outlined in the Department of Primary Industries Extension Strategy (1992). It is

based on Carl Rogers' humanist approach to learning and Malcolm Knowles' concept of androgogy (adult learning).

The Action Learning Cycle forms an important and integral part in the process of learning and provides a structure to the learning experiences undertaken by *Futureprofit* participants during each workshop. The use of Action Learning provides a continual process of learning and reflection that is guided by the workshop facilitator and supported by members of the family units in collaboration with other workshop participants. It emphasizes getting things done. The individuals learn with and from each other by working on real problems and reflecting on their own experiences. This process helps each participant and family group to take an active stance towards their life and the range of management issues associated with managing their farm business.

The model described here is consistently applied to all aspects of the *Futureprofit* programme and is intrinsic to its delivery methodology. *Futureprofit* is a learning initiative that is grounded in the theory and practice of adult learning and facilitative learning principles. It uses a planning process that is consistent with the needs of adults. This process enables farming families to take control of their future. The outcomes of the workshop sessions are achieved through a facilitated, interactive process that allows family teams to work together with other local farm family units to identify where they are now and where they are heading in terms of the management and sustainability of their farm businesses. This self-directed process allows the members of each farm unit to learn new skills related to planning while they develop management plans that consider all the farm business resources – human, financial and physical.

## 2. *Does the programme invite facilitators and participants to think differently? If so, how?*

Throughout the delivery process, the participants undertake learning under the guidance of an experienced facilitator, who has been trained in all aspects of the programme's philosophy, structure and purpose. Experts from various fields are used as necessary to provide specialist information to meet the participants' needs throughout the delivery process.

Over the period established for delivery, participants work through an initial goal-setting exercise to establish a shared vision and goals for their farm business for the short and longer term. Subsequent workshops enable participants to take stock of the whole business. From their findings, the participants develop strategies to address areas of the business in need of change in order to meet their set goals. At the end of the workshops, participants have the basis of a strategic plan for their business. More importantly, through their knowledge of the planning process they have the skills to review and revise these plans as their priorities or life circumstances change.

Early workshop activities are used to help build a sense of honesty, empathy and acceptance of others and their ideas. Acknowledgment of existing skills and knowledge is an important aspect of the early activities in these workshops. Recognition of existing expertise is one means of ensuring that participants do not feel threatened. The learning environment encourages all participants to build on the already vast amount of skills and knowledge present in the group by actively sharing their own experiences and skills. The issue of self-esteem is also effectively addressed by developing a programme that has good standing and credibility within the community and industry. Willingness to pay for training courses does not appear to be a problem, as the course is perceived to be valuable.

In Queensland there are a variety of opportunities for improving facilitator skills ranging from observation and practice to gaining formal qualifications through a number of courses offered by the Rural Extension Centre (REC) – a joint partnership between Queensland's Department of Primary Industries and the University of Queensland. These courses, in the areas of agriculture and rural extension, make use of action learning and adult learning principles in course planning and delivery.

The training and experience of Futureprofit facilitators has led to an increased demand for their services by other agencies, organizations and community groups. While they are most sought after to provide assistance with the facilitation of workshops on strategic planning, personal development, managing change, and other topics, they are also in demand for consultations and employment in public and private industry.

Most importantly, the findings confirm that a desire for ongoing learning and a commitment to improvement are substantial outcomes for both participants and facilitators involved in Futureprofit.

### 3. *Does the programme actively engage adult learners in the learning process? If so, how?*

The Futureprofit Integrated Workshop Series (and all other Futureprofit workshops) actively engages farmers, graziers and their families in the learning process. It does this in a number of ways. First, the programme respects the experience and knowledge that farmers have before beginning the workshops. Second, the workshops make significant use of oral language to facilitate discussions and interactions between participants as a means to purposefully engage individuals in the learning process, particularly those with low levels of literacy. Third, workshops are arranged according to the priorities, time and location that best suit the participants' needs. Learning takes place within groups in a relaxed, informal environment. The groups generally consist of farmers and graziers who know one another or are socially compatible.

Further strengths of the programme allow for workshop participants to:

- ▶ share information, knowledge and techniques
- ▶ work together in groups to solve problems
- ▶ assess all components of their business
- ▶ decide on what is important to them as a family and business unit so as to secure the family's and the children's future
- ▶ examine financial and productive pressures on the business
- ▶ develop business plans to make the farm business more productive and profitable
- ▶ discuss production, management, marketing and land management issues with their neighbours
- ▶ be better informed and in control of decisions relating to the farm and the family business

### 4. *Do the outcomes of learning facilitate social change, justice and empowerment? How?*

An examination of the report of the national evaluation of PMP (1998) and the report of the recent evaluation of Futureprofit (2000) confirms that the programme's outcomes have facilitated social change, justice and the empowerment of farmers and farm families.

Significant change is reflected in quality of life changes that have led some participants to leave agriculture, while others are taking more holidays or devoting more time to family matters. Those remaining in agriculture have made changes in the type of farm enterprise they are engaged in. They have entered new markets, altered business structures or taken up new products. Still others have improved the condition of their land and other natural resources, or improved the profitability and viability of their farm businesses.

Participants reported change in communication as an outcome of their participation in Futureprofit workshops. Most frequently, these communication changes were recorded in conjunction with changes in skills related to time management, planning for succession, hiring practices and workplace safety.

In summary, the majority of participants felt they had improved their communication and people-management skills, several businesses had initiated family meetings, some family groups had made or

were considering making changes to staff management, and for several, succession planning was given a much higher priority. These findings for Queensland support the national evaluation findings, where 83 per cent of Queensland respondents surveyed said they were now more likely to discuss issues with others in the farm business or family than before they attended PMP workshops.

The notion of empowerment was in evidence across all recorded responses by Futureprofit participants. The theme of empowerment was manifested in two areas in particular: 1) the strategic decisions made by farmers in relation to the operation and management of their businesses, and 2) the participants' internal feelings of confidence and responsibility in family and/or business negotiations. The following two recorded responses are examples of these feelings:

*"As a wife I am participating in more decision making."*

*"Through Futureprofit we can now see that other types of enterprises would be more suitable for our sized farm. As our farm is on the market [for sale] we are now armed with skills that will enable us to make a more accurate and wiser decision next time."*

Linked to empowerment are issues relating to greater self-reliance, improved risk management and improved collaboration both on- and off-farm. The Futureprofit evaluation findings were compatible with national evaluation findings that indicated 63 per cent of respondents nationally were now more self-reliant in seeking information for problem solving as a result of their involvement in PMP. Queensland scored the highest percentage of respondents who had experienced change. The main themes that emerged from the Futureprofit evaluation related to restructuring, risk management strategies, and self-directed or self-supporting groups.

## Quantitative and qualitative results

Findings of the Futureprofit evaluation confirm that the programme had a positive impact on overall farm management in Queensland.

First, a significant number of farming and grazing families were reached. From 1996 to 1999, there were altogether 2,560 Futureprofit activities occurring in Queensland, with a total of 24,000 participant days recorded for Futureprofit activities in Stage II of the PMP Campaign. This figure represents the number of workshops multiplied by their duration. Approximately 60 per cent of the participant days were devoted to delivery of the Integrated Workshop Series (IWS), IWS Introduction and IWS Review, while the remaining 40 per cent were devoted to delivery of non-IWS workshops and activities (Figure 2).

**Figure 2: Non-IWS Futureprofit Workshops and Activities**

Type	Description	Content
DB2000	Dairying Beyond 2000	One to four workshop series dealing with deregulation and change management first and then moving to topics of interest.
FBM	Farm Business Management	Nineteen different workshops including succession planning, cash books, spreadsheets for better decision making, credit risk management and the Internet.
HRM	Human Resource Management	Nine different workshops including time management, conflict management, taxation and law for farmers, strategic planning and problem solving.
LP	Livestock Production	Nine different workshops including cattle husbandry, woody weed management, pasture monitoring and cattle management.



**Figure 3: Non-IWS Futureprofit Workshops and Activities** (cont'd)

Type	Description	Content
NRM	Natural Resource Management	Twenty different workshops including managing for climate, soil identification and management, planning for farm forestry, soil nitrogen and catchment planning.
Other	Other	Many different workshops including Action Learning Sets, land care, buying cooperatives, introduction to small business, computer-aided management, ICM / Futureprofit and marketing.

A total of 9,523 participants attended Futureprofit workshops and activities, with 4,662 of these participating in the IWS. The results of the Futureprofit evaluation confirmed findings from the national PMP evaluation (1998), of which Queensland was a part.

**Table 3: Attendance at Futureprofit Workshops and Activities**

Number of:	Intro to IWS	IWS	IWS Review	Non-IWS	All
Participants	2,618	4,662	n/a	6,500	9,523
Total businesses	1,719	2,738	n/a	4,030	5,825
New businesses	1,234	1,448	n/a	1,958	3,125
Groups	179	270	22	338	475

Second, there was a good representation of both men and women from Queensland's farm families. Overall, distribution by gender indicated 57 per cent attendance by men and 43 per cent by women. Table 2 shows the participation of men and women at different types of workshops.

**Table 4: Gender Distribution at Futureprofit Workshops and Activities**

Workshop type	% Male participants	% Female participants
Total workshops	57	43
Introduction to IWS	65	35
IWS	57	43
Non -IWS	55	45

For the IWS, equal gender participation was achieved only on IWS farm tours. Men were the majority of participants in the enterprise analysis workshops (58 to 64% for some enterprises but dropping to 54% for beef enterprise analysis).

The gender statistics indicate that for non-IWS workshops, when women made up more than 50 per cent of the group, the key topic was farm business management. Most of the workshops included the use of computers. The new Internet workshops had participation rates of 58 per cent women and 42 per cent men. Conversely, when men made up the majority of the group for non-IWS workshops, the key topics were related to production and natural resource management. The non-IWS workshop with equal numbers of women and men, which also had the most participants (439), dealt with succession planning.

Third, there were many reported changes in practices resulting in a better quality of life, a more profitable farming operation and improved condition of land and/or natural resources. Most noticeable changes in practice reflected:

- ▶ changes made to operations following systematic analysis of records and/or practices
- ▶ changed or new enterprises, markets, business structures or diversification
- ▶ empowerment to make strategic business decisions
- ▶ changes made to improve communication within the family/farm/network and changes made in relation to other human resource issues
- ▶ changes made to investment in natural resource management

Finally, there were positive changes in knowledge, attitude, skills and aspirations. Participants in the PMP programme reported greater confidence and self-reliance in regard to making decisions, using risk management strategies, and involvement with self-directed or self-supporting groups. Participation in the programme's Integrated Workshop Series has increased the motivation to learn and to take part in other learning activities. They are much more willing to make learning an ongoing part of their lives.

## IV. Conclusion

The greatest strengths of the programme are reflected in its structure and methodology. The latter formally acknowledges and respects the needs of adult learners as being central to the educational enterprise. The delivery aspects themselves, whilst providing support for the programme structure and its planned outcomes, realize the imperatives for adults to have control over their learning. The emphasis is on a humanistic approach to facilitate change through learning.

The value of the programme is that it puts technical advice into a holistic strategic framework so the participants can see its relevance in the context of their overall business direction. To increase the prospects for sustainability of the programme, links are made with allied industries and groups. Experts from the public and/or private sector provide technical input for the Integrated Workshop Series. These people are usually separate from the facilitators (although where facilitators are technically competent they may be the same person) and are responsible for providing technical input into the learning process. The use of private sector professionals such as solicitors, accountants and bankers as technical experts results in their becoming advocates for the programme amongst their existing clientele. The increasing level of participation by industry in the delivery of Property Management Planning is very important for the ongoing development of the programme, as it is applied in each Australian state and territory.

Another very important aspect of PMP is its role in establishing a demand for ongoing learning amongst participants. This means that PMP provides a mechanism for enhancing the demand for and identifying the availability of additional training opportunities for the farm sector, at both the local and state level. Such an outcome improves the effectiveness of policies in these areas. As the recent evaluation of the national PMP Campaign revealed, 73 per cent of past participants in PMP want to take part in further learning activities. The outcomes of the programme are stimulated by providing a range of training options to farmers wishing to improve their management skills beyond those provided through participation in the Integrated Workshop Series.

One of its most significant accomplishments is that the programme helps people to move from operational to more tactical and then more strategic thinking. Another significant outcome is that through the learning process it promotes attitudes and behaviours that strongly support the adoption of the principles of lifelong learning.

This case study, while focusing on a specific population of farming and grazing families in Australia, strongly advocates the strengths of the educational methodology used for the planning and delivery of the Future*profit* programme. These strengths indicate that the programme can be replicated for other learners in other situations without risk. The study confirms that the programme purposefully engages farm management teams in the process of learning as a means to develop their skills, effect social change, and facilitate community participation and action in ongoing formal and non-formal adult education. It also confirms that the successes of the programme are achieved by the grounding of all elements of the educational initiative within a framework of educational theory and practice.



# The Credit Bank System: An Innovative Approach to Adult Lifelong Learning in Korea

## I. Introduction

The Credit Banking System (CBS) is an open education system that recognizes diverse learning experiences gained not only in school but also out of school. When a student accumulates the necessary CBS-approved credits, then she or he can obtain an associate or bachelor's degree. The CBS aims to provide all citizens with greater access to various educational opportunities and to foster lifelong learning. It seeks to innovate, diversify and maximize educational opportunities for students who are studying at post-secondary institutions and for adults who are seeking additional education and training. In the long run, the CBS will raise the overall standards and status of the non-formal education sector as a vital means for promoting educational self-achievement and guaranteeing the global competitiveness of the Korean population.

### *Background*

Previously, non-formal modes of higher education in Korea were not given formal recognition or credit. The formal school system was considered to be the sole domain of education. This belief placed inordinate demands on the university or college system and created excessive competition amongst students. Moreover, the value and power of non-formal education were greatly underestimated, even though it provided people with a variety of practical knowledge and skills and people were willing to pay for it.

In 1995, the Presidential Commission on Education Reform (PCER), which was established in 1994 as a policy advising body to the President, presented an innovative vision of a new education system to promote the development of a society of open and lifelong learning. The purpose of this new education system was to give people a better opportunity to enhance their individual capabilities. The PCER proposed the introduction of the CBS as a concrete way to realize this vision.

On the basis of this proposal, the CBS gained government endorsement through a law passed on 13 January 1997. Afterwards, the accreditation system and standardized curriculum were developed and the first applications for accreditation from educational institutions were evaluated. In March 1998, it was first implemented in order to determine its applicability.

### *Aims*

The purpose of the CBS is to provide all citizens with greater access to a variety of educational opportunities and to foster a society of lifelong learning. It does this by:

- giving students more choices
- raising the quality of participating educational institutions
- focusing on vocational and technical areas for the 21st century
- establishing a society of knowledgeable individuals
- strengthening its identity by operating it differently from colleges and universities

Anyone can benefit from the CBS, especially the following:

- high school graduates who were previously unable to attend post-secondary institutions
- college or university dropouts
- workers who hold professional certificates but did not acquire university degrees
- college or university graduates who wish to commence studies in a different field
- people who wish to acquire formal credits for knowledge and skills gained through self-instruction and workplace training and experience
- individuals who have studied at private institutions or junior colleges and wish to transfer into the university system

The CBS will guarantee each student's right to access learning at any time and any place through a variety of ways. The means of obtaining credits will be more diversified in the future. The CBS will recognize individuals' diverse prior learning experiences, many national and private certificates, and online teaching. The goal of the CBS, through co-operation between diverse educational institutions, is to build a consensus regarding educational forms and outcomes, thereby maximizing the efficiency of developing and using human and educational resources.

## II. Management of the Credit Bank System

Students primarily acquire credits by completing programmes at educational and vocational training institutions, enrolling as part-time students in colleges or universities, acquiring various national certificates, and passing the bachelor's degree examination programme for the self-educated. The CBS provides associate and bachelor's degree courses based on the standardized curriculum and syllabus. This curriculum serves as the criterion for accreditation and credit approval.





The accreditation of educational programmes is approved through a set of criteria. If a student completes an accredited programme, she or he is eligible for credit recognition. The accreditation of the non-formal education programme occurs twice a year, and each non-formal education institute has to pay a minimum commission for accreditation. The Korean Educational Development Institute (KEDI) operates a committee for credit approval. The committee is composed of leaders from diverse social groups who screen the credits that students earn and who observe the students' learning experiences and activities. Moreover, KEDI provides a consulting system, an online service, and resources and information for learners and educational institutions.

### *Standardized curriculum and syllabus*

A standardized curriculum refers to a comprehensive learning plan customized for each subject area. It provides instructors with specific guidelines for curriculum preparation and students with a detailed description of possible ways to learn and meet educational goals. KEDI develops the standardized curriculum in co-operation with the Ministry of Education and through the consultation of relevant professionals. The curriculum is revised bi-annually in response to social change, academic and technological developments, and requests from teachers and students.

The standardized curriculum concretely addresses educational objectives, courses and electives, areas of specialization, graduation requirements for a bachelor's degree, and evaluation and quality control. A standardized syllabus describes the content which should be taught in a given subject area. The CBS requires students to complete at least 70 per cent of the courses planned for the standardized syllabus. The syllabus is jointly promulgated with the standardized curriculum.

Guidelines for the standardized curriculum and syllabus are as follows:

- A programme in any area of specialization is divided into three categories: liberal arts, major subjects, and electives.
- At least 30 credits of liberal arts are required for a bachelor's degree and at least 15 credits for an associate degree.
- Minimum credit requirements for major subject courses are 60 credits for a bachelor's degree and 45 credits for a two-year equivalent associate degree (54 credits for a three-year equivalent degree).
- Minimum credit requirements for a bachelor's degree are 140 credits and 80 credits for an associate degree (120 credits for an equivalent three-year course).
- The maximum credit limit per year is 36 credits for a bachelor's programme and 40 credits for an associate programme.
- Each credit consists of more than 15 hours (a one-hour course lasts 50 minutes; a one-hour lab lasts 100 minutes) and must be spread out at least over a two-week period.
- Accredited CBS institutions should provide more than 70 per cent of the courses designed according to the standardized syllabus. However, university extension classes and junior college special classes can adopt their own syllabi.
- Credits through certificate acquisition cannot be counted as liberal arts credits.
- Each educational institution can submit a new standardized curriculum and syllabus to KEDI.

### *Accreditation of educational programmes*

Accreditation is a formal evaluation of non-formal educational institutions and their subjects to determine whether the quality of their programmes and courses is equivalent in credit terms to those of universities or colleges. Some of the accreditation criteria are as follows:

- Instructors must have at least the same qualifications as a full-time professor at a junior college. There must be a sufficient number of instructors and the total teaching hours per instructor should not exceed 18 hours a week;
- Classrooms should be larger than 1.0 square metre per student and additional facilities should include a laboratory, administrative office, counseling office and library. Other provisions may apply, as dictated by the Ministry of Education.
- Offered programmes must comply with the standardized curriculum and syllabus for each subject.

The procedure of accreditation is as follows:

1. The Ministry of Education develops the basic plan of accreditation twice a year.
2. KEDI designs plans of action according to the Ministry of Education's overall plan.
3. The Ministry of Education and KEDI announce guidelines and directions for accredited institutions and other possible candidate institutions through official letters and/or daily newspapers.
4. Any educational institution may apply for accreditation by submitting the necessary documents to KEDI.
5. KEDI screens the submitted documents with the advice of specialists in each subject area as well as in lifelong learning.



6. After evaluation of the documents, an evaluation team, including members of KEDI, the Ministry of Education, subject specialists and administrators, conducts an on-site follow-up evaluation.
7. KEDI develops a final evaluation report and submits it to a screening committee for academic credit accreditation at KEDI, and then forwards it to the Ministry of Education.
8. The Ministry of Education makes final approval and passes a certificate of accreditation to each institution.

If any institution makes changes after getting a certificate of accreditation, then that institution should report them to KEDI along with the relevant documents. For example, if the institution wishes to replace an instructor, the resume of the new instructor with the relevant documents must be sent to KEDI at least two weeks before the commencement of classes.

### *Credit approval and degree*

Once a student earns credits from various sources, he or she must apply to KEDI to have the credits registered and to take the necessary measures to have the degree awarded.

Anyone who has a high school diploma or an equivalent educational background can apply for registration by completing a learner registration form and a credit approval application form. Each of these forms must be submitted either directly to KEDI or through a provincial office of education.

Credits may be acquired primarily through accredited educational and training institutions, part-time enrollment in university or college, certificate acquisition, or the bachelor's degree examination. A student can accumulate up to 36 credits in the bachelor's degree programme and 40 credits in the junior college programme in a given year. Credits acquired from any given educational institution cannot exceed 105 credits towards the bachelor's degree programme and 60 credits towards the junior college programme. The credits from previous university education are mostly accepted regardless of what year they were awarded. The acceptance of credits from national technical certificates varies according to how difficult it is to obtain them. Some of these certificates are counted as 45 credits with the minimum calculation being 4 credits. National technical certificate credits cannot be used towards credits in the liberal arts.

In Korea, another way of getting a degree without attending university or college is through a bachelor's degree examination programme for the self-educated. If an individual passes four stages of the examination, that person can obtain a degree. If a student passes certain subjects without passing all stages of the examination, then the credits from the subjects passed can be obtained through the CBS.

After completing the necessary credit requirements (140 credits for a bachelor's degree, 80 credits for a two-year associate degree, and 120 credits for a three-year associate degree), candidates may submit a degree application form to either KEDI or the provincial offices of education. The applications are reviewed by the KEDI screening committee for accreditation. Then the applications are forwarded to the Ministry of Education for final approval. Candidates may obtain a degree from the Ministry of Education or they may receive a degree directly from a university or college. In the latter case, candidates must meet the specific degree requirements set out by the awarding institution (e.g., over 85 course credits for universities and over 50 course credits for colleges).

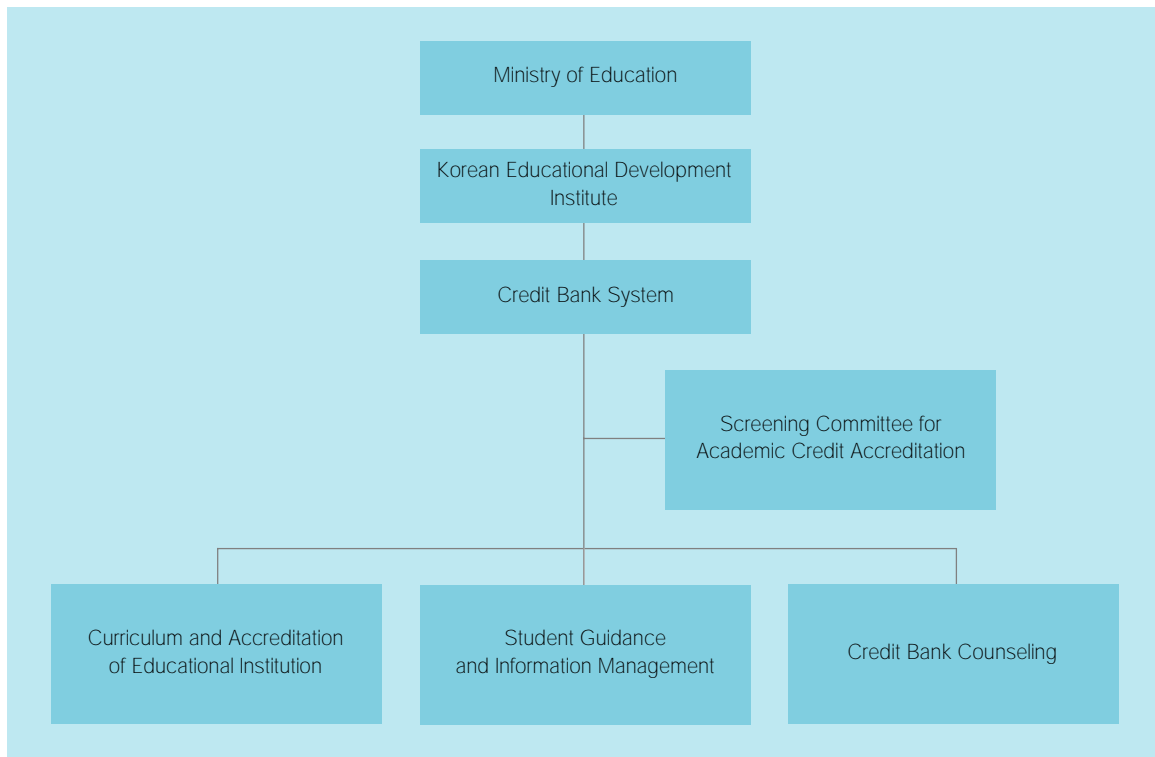
### *Administrative organization*

The Lifelong Learning Policy Division of the Ministry of Education formulates all policies related to the CBS, approves the educational programmes offered by education and training institutions, issues the standardized curriculum and awards degrees. The Ministry of Education delegates much of the developmental and administrative work to KEDI.

KEDI is responsible for student registration, credit approval, review and approval of degree requirements, accreditation, re-evaluation of education programmes and management of the Credit Bank Information Service System.

The provincial offices of education, which function as CBS information centres, not only collect and forward the learner registration forms and the credit approval application forms to KEDI, but they also provide students with practical information and advice. The administrative organization is illustrated in Figure 1.

**Figure 4: Administrative Organization of the Credit Bank System**



### *Characteristics*

The most distinctive characteristic of the CBS is its openness. The CBS, unlike the formal higher education system, tries to be transparent and flexible for everyone.

Anyone who has a high school diploma can apply to the CBS regardless of age, gender and background. University or college dropouts are admitted to the CBS, but students currently in universities are not allowed admission because of the principle that a student can only belong to one university or college. Graduates of college or university can enter the CBS.

The CBS accredits the programmes and subjects of the various non-degree institutions. One of the criteria of the accreditation is a standardized curriculum and syllabus. The subjects that the educational institutions submit for accreditation must be in the standardized curriculum, and more than 70 per cent of the course content should be the same as the standardized syllabus.

The standardized curriculum and syllabus help ensure uniformity and standardization amongst the various institutions as if they had the same accredited subjects. However, other sources of credit – universities and colleges, the national technical certificate, and the bachelor's degree examination programme for the self-educated – do not need to be influenced by the standardized curriculum.

The CBS specifies the traditional manner of study, namely lectures and discussions requiring classroom attendance. The correspondence learning method is currently not allowed. However, there is no restriction on the method of learning as long as there is face-to-face contact between instructor and learner.

In the CBS, both the institution and the students are assessed. The evaluation of the institution addresses the quality of teaching, lecturing, facilities, equipment, general management and assessment of subjects. Since the evaluation of the institution should follow the guidelines on evaluations made by KEDI, there is little flexibility and choice offered to each institution. Student evaluations are made by the institution at which the particular student attends. The method of evaluation is similar to that of universities: quizzes, reports, mid-term exams and final exams. Student results are sent to KEDI for credit registration. KEDI admits the results of those students with an academic score of at least 70 points out of 100 and an attendance rate of over 80 per cent.

The Credit Bank System in KEDI has an information centre and an online information service that provides the necessary information for institutions and students. Students can easily access the online comprehensive information system, which provides information on the following: academic planning, methods of counting credits, accredited institutions, the various subjects, mentors and teachers, standardized curriculum and syllabus, and obtaining a degree. KEDI, the provincial boards of education, and the accredited institutions all have information centres.

### III. Achievements of the Credit Bank System

#### *Quantitative achievements*

##### **Standardized curriculum and syllabus**

The standardized curriculum and syllabus have been revised five times and published for distribution to metropolitan and local offices of education, as well as to educational institutions. As of February 2000, 151 standardized curricula (70 at the university level and 81 at the junior college level) and 1,717 syllabi have been developed. Among the 151 standardized curricula, 78 curricula are classified into natural sciences. These figures reflect the CBS policy of promoting vocational and technical fields over liberal arts and social sciences.

##### **Accredited educational institutions and their enrollment**

Accreditation procedures have been implemented five times and 323 educational institutions are presently accredited. Private tutoring institutions ranked the highest, with 153 accredited institutions. Lifelong education institutions affiliated with universities ranked the second highest. There are 177,208 students who had taken courses at accredited educational institutions and current enrollment in the year 2000 is 134,855 students.

##### **Degree acquisition**

In August 1999, 34 students were awarded degrees (25 bachelor and 9 associate degrees). Most of them were dropouts from university or college with national technical certificates in engineering. In February 2000, 650 students were awarded degrees including 111 bachelor and 539 associate degrees.

#### *Qualitative achievements*

The qualitative aspects of the CBS implementation were based on the results of surveys. Tables 2 and 3 contain percentages relative to the characteristics of selected institutions and students. The questionnaires

**Table 5: Percentages for Student Variables**

Variable	Level	% (n = 1,193)
Age	17-22 (schooling age)	50.0
	23-30	33.5
	31-40	9.8
	41-50	6.2
	51-62	0.5
Gender	Male	54.8
	Female	45.2
Location of Home	Metropolitan (Seoul)	41.7
	Large City	26.4
	Medium-sized City	26.0
	Village	5.9
Type of Degree Desired	Bachelor	21.4
	Associate	78.6
Employment	Full-time	16.1
	Part-time	12.2
	Unemployed	71.7
Monthly Earnings	Less than US\$900	23.8
	US\$900-1800	47.8
	More than US\$1800	28.5
Prior Education	High school diploma	79.6
	Two-year college dropouts or graduation	11.6
	University dropouts or graduation	8.9

**Table 6: Percentages for Educational Institution Variables**

Variable	Level	% (n = 155)
Types of Institution	Lifelong educational institution affiliated with universities	35.1
	Private institute in technical areas	23.4
	Private institute in areas other than technical	20.1
	Two-year vocational school	9.1
	Vocational training center (public)	5.8
	Computer science institution affiliated with universities	1.9
	Two-year technical school	1.3
	Others	3.1
	Major	Engineering
Liberal arts and social science		25.3
Arts and athletics		21.4
Natural science		13.0
Location	Metropolitan (Seoul)	43.2
	Large City	31.6
	Medium-sized City	20.0
	Village	5.2
Annual Enrollment	Less than 200 students	38.8
	200-600	26.5
	600-1000	15.7
	More than 1000	19.0

for the institutions were sent to all 262 accredited CBS institutions and 155 completed forms were returned (59.2%). The questionnaires for the students were sent to 1,670 students randomly selected from 99 institutions with an enrollment of more than 10 students. The return rate was 71.4% (1,193 out of 1,670). Some questions were answered on a scale from 1 to 5 (1 = strongly disagree/satisfied, 2 = disagree/dissatisfied, 3 = not sure, 4 = agree/satisfied, 5 = strongly agree/satisfied). Some questions were in multiple-choice form. The questionnaires also asked open-ended questions.

## Reasons for students' enrolling and administrators' participating in the CBS

Of the students who were asked various questions regarding their reasons for enrolling in the CBS, 44.2% responded that they wanted to continue their studies. Others (33.6%) responded that they wanted to add their CBS degrees to other educational accomplishments in order to keep a competitive edge when applying for jobs. The remainder (6.8%) wanted to use their degrees to seek promotions at work.

Administrators of educational institutions responded that they participated in the CBS because it is an effective system for lifelong learning ( $M = 4.38$ ;  $SD = 0.67$ ) and in preparation for future changes in the education system ( $M = 4.36$ ;  $SD = 0.66$ ) (see Table 4). However, the administrators disagreed that their participation was a result of participation by other educational institutions ( $M = 2.36$ ;  $SD = 0.92$ ). It appears that the CBS is considered a promising system to bring into reality a society of lifelong learning.

**Table 7: Administrators' Reasons for Participation in the CBS**

Survey Instrument Items	Responses (n = 155)	
	M	SD
To raise the social recognition of the educational institution	4.02	0.79
The CBS is considered an effective system for lifelong learning	4.38	0.67
To make a contribution to the development of education in the community	4.20	0.82
To attract more students	3.38	0.87
In response to participation by other educational institutions	2.36	0.92
To prepare for future changes in the education system and in society	4.36	0.66

## Satisfaction with the CBS

Table 5 shows the student satisfaction levels regarding the implementation of the CBS. Students were moderately satisfied with the quality of instructors, course content and teaching methods. However, they displayed dissatisfaction with library facilities and services, counseling, and tuition.

Administrators of the educational institutions were asked about the level of satisfaction with the management of the CBS and about their own participation in the CBS (see Table 5). The administrators were much more satisfied with their own participation but not with the management of the CBS. The results suggest that the managerial aspects need to be improved at the institutional level and at the central level of the Ministry of Education and KEDI.

## Student and Administrator Expectations for CBS Degrees

Students and administrators showed positive responses regarding their expectations of the CBS degrees (see Table 6). Both the students and the administrators displayed similar patterns of response. The mean scores for all items ranged between 3.32 to 4.03. The highest mean scores (3.87 for students and 4.03 for administrators) were recorded for the item that stated, "*The CBS will make significant contributions to improving individual abilities*". The lowest mean scores were recorded for the item that stated, "*Degrees*

**Table 8: Student and Administrator Satisfaction with the Implementation of the CBS**

Survey Instrument Items	Responses	
	M	SD
<b>Learners (n = 1,193)</b>		
Course content	3.68	0.79
Teaching and learning method	3.64	0.81
Textbooks	3.40	0.85
Assessment	3.55	0.77
Instructor quality	3.79	0.82
Lecture and laboratory rooms	3.37	0.98
Laboratory equipment, computers, etc.	3.28	0.99
Library facilities and services	2.90	0.98
Counseling services	3.05	0.97
Tuition	3.13	1.01
<b>Administrators (n = 155)</b>		
Decision to participate in the CBS	3.92	0.84
Management of CBS at institutional levels	3.07	1.03
Central management by the Ministry of Education and KEDI	3.28	1.77

**Table 9: Student and Administrator Expectations for CBS Degrees**

Survey Instrument Items	Responses (n = 155)			
	Learners		Administrators	
	M	SD	M	SD
Degrees acquired through the CBS will be socially recognized at the same level as degrees through regular universities.	3.51	0.95	3.49	0.88
Degrees acquired through the CBS will be as helpful as university degrees in seeking employment and promotions.	3.34	0.98	3.32	0.81
The quality of the degrees acquired through the CBS is equal to that of the degrees obtained through regular universities.	3.44	0.96	3.58	0.83
Degrees acquired through the CBS will alleviate social discrimination due to different educational accomplishment.	3.73	0.85	3.95	0.75
The CBS will make significant contributions to improving individual abilities.	3.87	0.80	4.03	0.71

*acquired through the CBS will be as helpful as university degrees in seeking employment and promotions".* The expectations of students and administrators regarding the CBS degree are mostly positive.

### Advantages and disadvantages of participating in the CBS

The administrators' responses to the open-ended Item 17, "Please list the advantages and disadvantages of your participation in the CBS", are summarized in Table 7. The administrators displayed seven different opinions for the advantages, while there were nine different opinions for the disadvantages. Most administrators (49.4%) of participating institutions in the CBS observed that they took the advantages of raising social status and gaining advertising effectiveness. However, some institutions (23.3%) insisted that participating in the CBS caused financial loss to the institution due to low enrollment. It seemed that institutions with low enrollment did not properly consider students' interests when they applied for the courses for the CBS. Even if their courses were accredited and open for students, those courses did not

meet student expectations and consequently some of them had to be cancelled. The results suggest that the CBS has earned recognition and that it leads educational institutions to improve the quality of education. However, a more effective means of management would be for the central institutions to invest in nationwide promotion of the CBS, and to reduce the administrative workload in the educational institutions.

**Table 10: Administrator Responses to the Advantages and Disadvantages of Participating in the CBS**

Opinions	%
<b>Advantages (n = 156)</b>	
To raise the social status of the institution and the effectiveness of its advertising	49.4
To create an effective learning environment and provide opportunities for higher education	17.2
To advance the quality of the curriculum, teaching and learning, and other resources and facilities	11.5
To increase profits through high enrollment	10.3
To make a contribution to the community	7.7
To establish a group of quality instructors	2.6
No advantages	1.3
<b>Disadvantages (n = 86)</b>	
Financial loss due to insufficient enrollment and high cost of instructors	23.3
Heavy administrative workload	18.6
Financial loss from excessive investment for advertising, lecture rooms, and lab facilities	18.6
Difficulty in recruiting students due to the public's lack of understanding of the CBS	17.5
Difficulty in adjusting vocational and technical fields to the standardized curriculum and syllabus due to its rigidity and different guidelines from those of the Ministry of Labor	9.3
The institution's loss of social recognition due to the cancellation of courses	4.6
Difficulty in following the regulations and guidelines set by the Ministry of Education and KEDI	4.6
No disadvantages	2.3
Disturbance by students who were not interested in studying but acquired a degree	1.2

## V. Discussion and Suggestions

### *Achievements of the Credit Bank System*

Since 1998, accredited educational institutions have implemented the CBS as a non-formal education system with various educational programmes. The CBS gives students credits for the completion of these programmes. The CBS also approves credits from a national certificate for special skills and for passing the bachelor's degree examination. Students use the accumulated credits to apply for associate and bachelor's degrees. As the CBS provides opportunities for higher education, it establishes the foundation for a society of lifelong learning. The achievements of the CBS can be placed into three categories.

First, the CBS is the foundation for realizing a society of lifelong learning and open education. The CBS encourages people to participate in lifelong education programmes by granting credits for various out-of-school learning experiences. The implementation of the CBS is a turning point in transforming a closed education system into an open one.

Second, the CBS provides opportunities for higher education to those who have longed for degrees. Korea is a society that considers degrees as more important than abilities. If a person does not hold a degree, that person's real ability is likely to be underestimated. The CBS is recognized as an alternative way of obtaining a degree.





Third, the CBS improves the social status of educational institutions within the non-formal education system. In the past, such institutions did not gain the recognition they deserved from the public, even though they offered quality education equal to universities. The CBS allows non-formal educational institutions to offer credits in the ways that universities do. Consequently, the institutions are able to compete with universities and are able to make significant contributions to the improvement of the nation's education.

### *Issues and concerns*

Although the CBS makes a significant contribution to raising the social status of educational institutions, and also to enhancing opportunities for higher education, there are some concerns because involved personnel and institutions tend to keep their benefits away from their counterparts. Major concerns include educational institutions' superficial management of CBS courses and students being only interested in obtaining degrees, rather than in learning.

First, the superficial management of the CBS by educational institutions will not contribute to the realization of a society of lifelong learning. The educational institutions have to organize a class of 40 students and handle administrative work such as academic records, student affairs and counseling. They have to restructure the existing system of administration and provide a support service for adult students. Some institutions are reluctant to invest in hiring new administrative staff and, consequently, they become unable to provide proper administrative services. If the courses and programmes offered do not meet the students' needs and interests, then the institutions will have difficulty in managing the CBS. It appears that many institutions do not develop courses and programmes based on these needs and interests. Instead, they tend to exploit their name value as an accredited educational institution by the Ministry of Education.

Second, there are those students who are not interested in learning but are only interested in obtaining degrees. The CBS pursues a vision of a society of lifelong learning and encourages people to continue to

be engaged in learning throughout their lives. Awarding degrees is not the fundamental goal of the CBS. Students are supposed to seek ways of improving their abilities to learn by combining their knowledge and work experience with the CBS programmes. However, some students use the CBS merely as a means of acquiring degrees within a short period of time. These students do not seem to express much concern about real learning. Although such student attitudes might be considered a mere phase, they do work against the development of a society of lifelong learning.

## *Suggestions*

### **Encouraging the participation of the private sector by increasing its autonomy**

Recently, the Government has tended to cater to the private sector. In particular, higher education institutions have gained more power and authority from the Ministry of Education. As the CBS plays an important role in higher education, it is necessary that the CBS as an open education system should be flexible and comprehensive in terms of its management. The private sector should also gain more autonomy when it participates in the CBS. One strategy to facilitate such a policy of increasing institutional autonomy recognizes that KEDI as a government commissioned agency as well as private educational institutions will gradually be given the power of regulating themselves. We recommend that an association of educational institutions be organized to serve as a screening system to develop standards for improving the quality of education.

### **Diversifying ways to approve credits**

The CBS needs to expand the range of student learning experiences. It aims to approve credits from various learning experiences in school as well as out of school. Currently, the bachelor's degree examination for the self-educated has been implemented to create a lifelong learning system and an educational account system will later be introduced. The educational account system can be connected to the CBS and new strategies for including other learning experiences should be developed. In addition, various programmes of distance education will be further expanded due to rapidly developing information technology. Some of these programmes will be part of the CBS. We need to develop new standards for evaluation and strategies for approving credits for the CBS programme offered via distance education.

Moreover, the CBS has not yet approved credits for adults' various learning experiences in daily life and in the workplace. Those who have such experiences might have high levels of knowledge and skills and it should not be necessary for them to take additional courses at educational institutions in order to obtain CBS credits. Submitting a portfolio or taking examinations may be alternatives for them to obtain these credits. Such alternatives should be implemented as innovative strategies for the CBS.

### **Differentiating the CBS from the formal education system**

The CBS intends to develop an ability-oriented society. The current education system is a school-based system. But, in a society of open education, people should not be confined by a school-based system of education, except for compulsory education. The school-based system of education should be abolished. An individual's capabilities should be the criterion for those who are allowed to enroll in the CBS.

Another strategy for differentiating the CBS from the formal education system is to have it offer various subject areas that are not available at the universities. The CBS institutions should open up new fields based on the needs of learners, changes in society, and updated knowledge and skills in science and technology. The CBS should be flexible enough to approve these new fields as major subjects and to award degrees. The qualifications of lecturers who would transmit knowledge in these new areas should be also flexible. There should be a set of criteria for qualifying CBS lecturers that is different from those used for university lecturers.

## Introduction of graduate studies

The CBS is designed as an alternative to undergraduate studies. It does not offer graduate study courses. Extended opportunities for higher education should not be limited to the undergraduate level. The CBS should create new courses and programmes for graduate studies that cover new areas not provided by regular universities, and the CBS should extend the opportunities of higher education up to the graduate study level.

## Improvement of management strategies

The current procedures of accreditation for educational institutions are based on individual courses. Where an educational institution is applying for accreditation, that institution should be accredited according to its ability to offer the CBS educational programmes, not on the basis of its ability to offer individual courses. Moreover, the programmes should ensure quality education. The administration for credit approval should be organized according to students' needs. Currently, credit approval is given four times per year (January, April, July and October) due to shortage of administrative personnel. Credit approval should occur at the times when students are about to enter or transfer to universities and apply for graduate studies.



# An Innovative Approach to Adult Lifelong Learning: An Adult Computer Literacy Training Programme for Underserved Villagers in Malaysia

## I. Introduction

Continuing education for adults in Malaysia is an old tradition. Providers of continuing education programmes include various organizations such as government agencies, private companies and NGOs. Nevertheless, there is no particular system or structure that enables us to compile all these various programmes for the purpose of study and understanding. Furthermore, these programmes are seldom documented for use as models for others. Thus, in conjunction with the 1999 ARTC Technical Meeting held in Seoul and hosted by the Korean Educational Development Institute (KEDI), UNESCO PROAP undertook the task of presenting a number of innovative projects in its Member Countries including Malaysia. Consequently, the meeting agreed with the recommendation that Malaysia conduct a study on the implementation of a continuing education programme for underserved adults. The computer literacy training programme was selected for this study.



### *Development context and situational analysis*

As a developing country, Malaysia consistently plans and implements development programmes through government agencies with the co-operation of the private sector and NGOs. The recent rapid expansion of

information and communication technology (ICT) has important implications for all of these programmes. Thus Malaysia has embarked on the development of an ICT project through the Multimedia Super Corridor (MSC). The MSC, which was launched in 1998, provides the infrastructure, policies and practices for ICT related companies to develop more liberally and effectively.

### *ICT development in Malaysia*

The MSC is a catalyst for the development of an information society in Malaysia. Therefore, the nation's development should be in tandem with the development of ICT in both urban and rural sectors. Without a balanced rural and urban ICT growth, the vision for Malaysia to be a developed country by the year 2020 will not become a reality. Malaysia's Vision 2020, as described by Prime Minister Mahathir Mohamed in 1991, stresses the requirement of strong growth in the service sector to match growth in the manufacturing sector. Equitable growth in both sectors will increase productivity and improve the quality of life in Malaysia. Compared to other countries in the region, the current ICT growth in Malaysia is sluggish. For example, the Internet usage rate for Malaysians is currently at 6.9 per cent compared to 24 per cent in Singapore, 20.6 per cent in Taiwan, 36.2 per cent in Hong Kong, 29.6 per cent in Australia, and 34 per cent in Korea.

### *Problem statement*

Rural development in Malaysia requires sustained and exponential efforts. Innovative programmes must be effectively planned, implemented and evaluated. Without these efforts, the 52 per cent of the population who live in the rural areas will be left behind and marginalized in the development of the country. Comparably, ICT development in the rural areas lags far behind that of the urban areas in terms of infrastructure facilities, usage and education. Incidentally, accurate information on the status of ICT growth in rural areas is still not available. This is due to the lack of empirical studies and data compilation in this area despite the existence of ongoing ICT-related programmes for many years.

### *Specific objectives of the study*

1. To describe the planning and implementation process of computer literacy training programmes or projects for underserved adults
2. To identify the demographic characteristics of participants in the computer literacy training programme
3. To describe the changes in knowledge, attitude and aspiration of the computer literacy training programme participants

### *Rationale and importance of the study*

Efforts to reduce the income disparities between different socio-economic groups have always been in the forefront of national development in Malaysia. The advent of ICT has added a further dimension of social inequality. Apart from the lack of infrastructure and facilities for ICT, computer literacy in the rural areas, particularly amongst adults, has become a major concern for development.

Thus the Malaysian government has undertaken steps to increase ICT knowledge in rural communities. The National Information Technology Council (NITC), chaired by the Prime Minister, through its National Information Technology Agenda (NITA), has emphasized the need for equal development opportunities among individuals, with equitable access to ICT infrastructure and applications for all. As a consequence, the Ministry of Rural Development has become the lead agency in the development of an ***Electronic Community for the Underserved***. The improvement of ICT knowledge in rural communities is one of the main missions of rural development under the Eighth Malaysian Plan.

An effective programme evaluation is an important step in programme development. Information gathered from the evaluation process will be used to improve future programmes. In this context, the computer literacy training programme organized by the Institute for Rural Advancement (INFRA), Ministry of Rural Development (MRD), has to be evaluated to determine the participation level, impact, and the overall experiences gained in the planning and implementation of the programme. The information gathered for the evaluation will be used to determine subsequent computer literacy programmes and to ensure that they will be better organized for effectiveness and optimum returns to the country.

### *Scope and limitations of the study*

This study focuses only on computer literacy training programmes for adults organized and conducted by the INFRA. The course is offered to adults who have never had the opportunity to learn about using computers while they were in the formal school system. The lack of learning opportunities at school could be due to the lack of financial resources, insufficient facilities or simply because computer technology was not available then.

There are two computer literacy training programmes under the MRD, namely those organized by the INFRA and by the Division of Community Development (KEMAS). For this study, only those participants who attended the INFRA training programmes during 1999 and 2000 were used as respondents.

The data were obtained from documents, secondary data and interviews using a qualitative approach. This approach afforded an in-depth understanding of what it meant for participants to attend the computer literacy training programme. In view of the limited time, accessibility and financial resources available for the study, the combination of a quantitative (document and secondary data analysis) and qualitative approach was considered appropriate.

### *Contextual framework of the study*

In view of the descriptive nature of the study, both qualitative and quantitative data were used. However, a correlational analysis between variables and hypothesis tests were not conducted. Quantitative data were obtained from the various documents provided by the training providers and from secondary data. On the other hand, qualitative data were collected through semi-structured interviews and focus group interviews of officials and respondents respectively. The qualitative approach addressed Objectives 1 and 3 of the study, while Objective 2 relied on quantitative data.

### *Operational definitions*

**Adults:** Individuals over 18 years of age with the capacity to make their own decisions

**Underserved:** The adult population who did not have the opportunity to acquire computer-related knowledge and skills when they were at formal school due to the lack of available resources and opportunities

**Computer literacy course/training:** Adult learning training programmes conducted by institutions to assist adults in acquiring basic knowledge and skills to use computers

**Information and Communication Technology (ICT):** A new innovation for generating, storing and retrieving information via computer technology

**Village Development and Security Committee:** A form of village administration found throughout Malaysia created by state governments through their respective district offices. This committee, consisting of 12-15



people led by a chairman, is responsible for village administration. The members are individuals and representatives of non-formal organizations existing in the village.

## II. Details of the Programme

### *Computer Literacy Training Programme*

In 1996 the Ministry of Rural Development (MRD) launched a nation-wide programme called the Rural Vision Movement (Gerakan Desa Wawasan – GDW). This programme aims to promote the villagers' self-reliance in the process of planning, implementing and evaluating community development programmes in their rural communities with minimal assistance from the authorities. Part of the emphasis of this programme is the provision of continuing education opportunities through courses organized for the Village Development and Security Committee members (JKKK). One of the activities under the Rural Vision Movement training is the course on basic computer use so that rural communities will not be left behind in the nation's ICT development process. The provision of computer literacy training is in line with the Government's aspiration to achieve a developed nation status based on information and communication technology.

The Institute for Rural Advancement (INFRA) organized the first computer literacy training programme in Peringat, Kelantan, in September 1997. Since then it has continuously offered the programme to members of JKKK. A total of 20 such training courses were conducted in 1998, 16 in 1999, and 21 in 2000. These training programmes were conducted at several of the MRD training centres such as the Rubber Industry Smallholders Development Authority (RISDA) Training Centre, Federal Land Consolidation and Rehabilitation Authority Training School, INFRA and a few other privately-owned training centres.

The three-day training programme is designed to introduce participants to the importance of computers and their uses in rural development. Lectures and hands-on experience allow participants to learn about





the computer and software such as Microsoft Word, Excel, and PowerPoint. Apart from providing its standard training manual on computer literacy, the INFRA generally contracts out the courses to privately-owned training centres that conduct regular computer training courses or to other centres under INFRA supervision. The trainers are those who are highly competent in computer application. In addition, speakers from the Ministry of Rural Development and the INFRA are also invited to explain the ministry's policies and programmes, particularly on computer usage.

The INFRA bears all costs related to the training. These costs include trainers' remuneration, board and lodging, transport allowances, and loss of income allowances for participants. On the average, the cost of the training package per participant per day is about RM400 excluding trainer's remuneration. Altogether, the INFRA spent RM 148,080.00 in 1998, RM103,831.22 in 1999, and RM200,542.20 in 2000. For the year 2001 the INFRA plans to organize 31 courses with an estimated cost of RM186,304.

The Government's commitment to develop the ICT sector is evident in the formation of the National Information Technology Council (NITC) and the promulgation of the National Information Technology Agenda (NITA). This agenda calls for the development of ICT in the rural areas. Included in the agenda is the setting up of the Rural Information Centre (Medan Infodesa -MID), a pilot project to be launched in 2001. The computer literacy training programmes of the INFRA and other agencies under the Ministry will partly be subsumed under the MID. The MID is a one-stop ICT community service centre that also conducts ICT-related courses and promotes electronic business activities. In addition, the Ministry of Rural Development will continue with its programme of supplying personal computers at reasonable prices to all villages selected under the Rural Vision Movement. In this connection, the Ministry has also launched a computer assembly pilot project in a rural village.

### *Planning the Computer Literacy Training Programme*

The computer literacy training programme organized by agencies under the Ministry of Rural Development involves a top-down planning process. Planning officials at the Ministry deemed it necessary that these courses provide opportunities for rural communities to become acquainted with computer technology and its use. The provision is in accordance with the Government's aspiration to reduce the urban-rural technological gap or the digital divide. The relatively disadvantaged rural communities will have equal opportunities to develop their potential. The top-down planning process is accomplished without the benefit of prior assessment. Thus there are no empirical data available on computer literacy, computer ownership, computer-related resources, and problems faced by people in learning about and owning computers.

In the case of curriculum development, INFRA officials have developed the course curriculum and training manual jointly with the course instructors. Apart from literacy courses, the INFRA also offers advanced training courses for participants who have undergone basic computer courses. In the training of trainers advanced courses, selected participants identified as prospective trainers review the content of their earlier courses and proceed to learn about using the Internet, computer repair and maintenance, and ways to teach computer literacy to their fellow villagers.

### *Respondent profile*

The average class size for the basic computer literacy course for the years 1998, 1999, and 2000 was 26 participants. A total of 57 courses were conducted over the 3-year period for a total of 1,482 participants. The participants were 61 per cent male and 39 per cent female. The average age for all participants was 38 years. The age range of participants was from 15 to 76 years.

Although the training programme was designed for the Village Development and Security Committee members (JKKK), the INFRA has consistently specified that at least one in five or 20 per cent of the prospective participants for each village must be a youth, and one a woman. However, others have also attended the computer literacy training programme. Generally, this is because committee members send their representatives when they cannot attend the courses themselves. As for occupation, participants comprised civil servants (40%), farmers (31%), private company employees (8%), housewives (6%), private business owners and operators (5%), retirees (5%) and students (5%).

### III. Research Findings

The data used in this study were obtained from documents, secondary data, focus group interviews and in-depth interviews. Here we will specifically look at the experiences and changes in the participants, and the challenges in conducting the study.

#### *Experiences and changes in participants*

Secondary data from a survey at Kampong Bayangan, a Rural Vision Movement village in Keningau, Sabah, indicated that the household ratio for personal computer ownership was 1:2, i.e., a computer for every two households. Altogether there were 75 computers for the 1,080 residents (a 1:14 computer to resident ratio). Amongst the residents, 34 per cent were able to use a personal computer. Overall, 11 per cent of the residents (121 people) were skilled at personal computer use. The 26 - 36 year age group had the highest percentage (30%) of people with computer skills.

Although benchmark data on the villagers' computer skills prior to the computer literacy training programme were not available, the general changes in residents' knowledge and aspirations were encouraging. The focus group discussion indicated that residents were more confident in using computers and were planning to make use of their computer abilities. For example, Aminah (not her real name), a housewife, talked about attending the computer literacy training programme at first as an escape from the somewhat monotonous routine of house-keeping, cooking and looking after the children. According to Aminah,

*"Learning about the computer is something new. Now at least I know what using the computer is all about. Hopefully with whatever newfound abilities that I have, I can teach my children how to use the computer. Although we don't have a computer at home now, we will eventually get one."*

Aminah's niece, Zaiton (not her real name), age 17, who accompanied Aminah to the computer literacy training programme, had just completed her Secondary Five national examinations. Aminah persuaded her to attend rather than spend her days at home. For Zaiton, this course has enabled her *not to be at the old level (of computer illiteracy)*.

Rahmat (not his real name), a general worker in the village, asserted that he was comfortable with his newfound knowledge. He remarked, *"When people talk about the computer, I know what they are talking about, although I don't say anything"*. Rahmat was determined to make a living in the computer industry. He said that the computer literacy training programme and the subsequent INFRA courses that he hopes to attend will allow him to learn about computers inexpensively. He said,

*"Without this type of course, I cannot afford to pay the fee for courses at other places, but the desire is still there. I will still find a way to learn about computers, maybe from friends. I really want to know about servicing the computer. That will be my source of income, one day."*

In general, the INFRA's computer literacy courses have been well received. Attendance levels for 1998, 1999, and 2000 were at 79 per cent. The focus group interview with participants indicated that they had increased their knowledge and skills related to computers. However, most participants did not have the opportunity to practice their knowledge and skills due to the absence of computers at home. Nevertheless, those who had computers in their place of work were able to make use of their knowledge and skills. This group included teachers, office workers, students and those that held posts on the Village Development and Security Committee, such as the committee secretaries.

Those (almost half of the participants) who did not apply their knowledge and skills reported that there was no pressing need to use the computer. Most did not use one in their daily lives. There were also those who reported that they felt like *a kite that has snapped its string*, meaning that they were confused because the knowledge exposed to them was too advanced. They were generally too shy to ask the instructor or even their friends about the material being taught. Those who had no experience with computers were *afraid* to use them. They were concerned that the machines might break down. They were always left behind in class.

Participants, particularly the elderly, also reported that the hand-eye co-ordination needed for using the keyboard was a hindrance to learning. Computer terminology and jargon were also reported as obstacles. Most participants found difficulty with the English language used in talking about computers and software, such as *MS Word*, thereby making learning a complex endeavour. Regardless of their lack of learning, participants still maintained that they had a positive view of ICT.

For participants who had the opportunity to use a computer, they claimed that they used the knowledge to type letters and write reports, an activity that became simpler and easier. In addition, some even used computers for effective public presentations and for the systematic management of information.

In relating their experiences and the impact of computer knowledge, participants said that they were more confident about the role of ICT in developing their village. They hoped that courses such as the ones they attended would continue. They also hoped that they could increase their skills through more advanced courses. Respondents indicated that they were willing to purchase a personal computer even if they had to forego other items such as clothes, home appliances and other small luxury items. As long as they had money for food and their children's school expenses, they felt that buying a computer was worthwhile.

### *Challenges in conducting the study*

Overall, this study was successfully conducted with the co-operation and support of the relevant agencies and personnel. The Ministry of Rural Development, the INFRA and course participants readily provided assistance and information for the study. The only problem is the absence of comprehensive information that can be used as a benchmark to determine the quantitative changes in knowledge, skills and attitudes of participants regarding computer use. Therefore a qualitative approach is suitable for answering the research questions on the process and learning experiences of the course participants.

Documents that indicate philosophy, approaches, programme objectives and planning activities of the course were not available. The researchers obtained historical accounts of the computer literacy course through interviews with several officials who were responsible for the programme. Information was also obtained from various other documents. All these data were compiled for analysis.

The computer literacy course has never been evaluated before this exercise. Hence there were no available documents regarding the course. After three years of implementation, the researchers felt that it would be useful and timely for the course to be reviewed for improvements.



The conclusions and recommendations of this study were made based on the information that is currently available. We believe that a comprehensive study can reveal and provide better insights into the computer literacy course. These findings are important if rural communities are not to be bystanders in the ICT development process.

#### IV. Discussion

The Institute for Rural Advancement's computer literacy training programme is an innovative effort to increase computer knowledge, understanding and skills for the development of rural areas. Furthermore, the computer literacy course has managed to develop positive attitudes towards the role of and need for computers in everyday life, including the basic use of a word processing program such as MS Word by villagers.

The computer literacy course is one of the programmes under INFRA that receives a higher monetary allocation when compared with other programmes. The training programme is intended for the Village Development and Security Committee members in all 6,000 GDW villages and serves as a basic course for more advanced computer courses that aim to develop trainers in the *Medan InfoDesa* (MID). Thus, in order to determine whether the rural areas are being included in the development of ICT, the computer literacy training programme has to be evaluated for its impact.

Apart from the INFRA there are several other agencies and private businesses that offer computer literacy courses for rural residents. These organizations include KEMAS, the State Secretariat's Office, State Development Office, the District Office and local universities. Training programmes organized by government departments are usually offered free of charge to the community as continuing education programmes directed towards increasing the effectiveness of the village administration. The MID programme under the Ministry of Rural Development is a brainchild of its Technical Working Group on Rural ICT under the Eighth Malaysia Plan and is co-ordinated through its steering committee and technical committee. However, co-ordination between ministries outside the MRD agencies is still nonexistent. The results are poor resource utilization, duplication of courses and repeat attendance by participants.

Despite positive indicators as to the immediate benefits of the training programme, some participants had no applicable knowledge about computers. Hampered by low education and the lack of English language ability, participants reported that the course was too advanced for their understanding. When these participants were asked why they did not seek the assistance of the instructor, they replied that they did not wish to cause any trouble. Low self-esteem and the absence of confidence represent a barrier to continued learning. It is recommended that instructors for the training programme sponsored by the INFRA apply the principles of andragogy. Andragogy emphasizes a student-centered approach to the teaching-learning process where learning begins from the knowledge level of the participants. More importantly, the learners' interests rather than the instructor's course material are emphasized. Then participants will be able to manage and determine their own learning.

The focus group interviews indicated that the respondents were happy to be able to participate in the course. They felt that their participation supports the INFRA programme. Hence they heartily accepted offers to attend the course and subsequent advanced courses that the INFRA or any other agency organized. The spirit of returning favours to the educational providers was high among participants. Further inquiries into this spirit can provide some understanding of ways for turning this culture of giving and receiving into a viable approach for rural development.

The experiences from this study also show that there are several factors related to the participation of adults in a learning programme. According to Morstain and Smart, there are six factors associated with the participation of adults in learning activities. These factors are social relationships, external expectations, social welfare, professional advancement, escape or stimulation, and cognitive interests. Apart from these six factors, the study found that participants were attending the course to repay the kindness of the providers for inviting them to a previous course or for any other assistance that the agency had rendered to them prior to the course. The culture of obliging sponsors is still practised in the rural areas, especially amongst Malays.

At times, when a selected participant cannot attend a course, he or she will nominate a representative to attend on his or her behalf. This practice usually results in a certain incongruity, because generally the representative will not have the specific qualities that the provider looks for in a participant. The INFRA as a training provider is not excluded from this problem.

Studies have indicated that non-participation of adults in learning activities is usually the result of time or financial constraints. This study found that the failure of intended participants to attend is not due to time constraints or financial reasons. However, the main reason for non-participation in INFRA programmes is the prospective participant's prior commitments, usually concerning family matters. Generally, farmers, business people and civil servants, who form the bulk of participants, do not have difficulties obtaining leave from work. Furthermore, the courses offered by the INFRA include board and lodging. A loss of income allowance of RM 10 per day is also paid as compensation for non-salaried workers who attend the courses.

## Conclusions

We can draw three main conclusions from the findings of this study:

1. The INFRA computer literacy training programme is well received by the rural community. The positive attitude demonstrated by the participants provides a strong foundation for rural development efforts. Nevertheless, this alone is no guarantee that the programme will achieve its intended impact. To determine the impact of the computer literacy course, there has to be an evaluation of both learning and practical outcomes. If providers are content with simply a positive attitude as an outcome of the programme, the actual desired end results may be forgotten, and the goals of rural development not achieved. Thus

many participants may be pleased that they have had the chance to learn how to use a computer, but end up never using one. As a result, computer use, ownership and participation in ICT development will still be at minimal levels, and rural communities will remain marginalized. A comprehensive rural programme that takes into account aspects of learning, computer usage and ownership, and participation in ICT has to be conceptualized and implemented.

2. The course curriculum and instructors assume that participants have a basic knowledge of computers and are competent in their grasp of basic computer terminology. The assumption of homogenous learners in this case can be a pitfall for the success of the programme. Planners may believe that the participants already have a rudimentary English competency, but in reality the majority cannot understand the English language and terminology that are used in the course. Planners may also assume that participants will have access to computers after the course is over. Yet most participants do not own personal computers and do not have a pressing need to use them in their daily lives. As most of the participants are farmers or workers, they have yet to find the computer useful in their work. Unless these groups of participants hold positions in the community such as committee secretary, most likely they will have little use for computers. Participants have also reported that their use of computers is limited to word processing. While the computer does make writing easier, the full use of the computer's potential has yet to be realized. The information obtained from this study indicates a disparity between learning and use. Considering that computer skills will dissipate in the absence of practice, there is a strong argument for the augmentation of the programme to include computer access and use among participants.
3. The INFRA computer course is an important programme for the National Information Technology Agenda (NITA). The improvement of the programme can help realize the nation's aspiration of achieving rural development through ICT. The Ministry of Rural Development's scope of rural development encompasses all aspects of development. Combined with the Government's commitment of increasing ICT awareness through its policies and financial allocations, the INFRA computer training programmes can open the path to rural development. Continuous evaluation of these programmes will further improve their effectiveness and meet the ICT needs of rural communities and the nation.

## Recommendations

After considering the findings and the conclusions of the study, we can make the following recommendations in regard to policy and practice:

1. The computer literacy course organized by the INFRA has to be evaluated on a continuing basis. The evaluation should be formal, comprehensive and systematic. The evaluation has to be an integral part of the course design and plan. If the decision to evaluate the programme occurs only at the end of the course, the opportunity to obtain suitable and timely information will be lost.
2. The participant registration forms have to be reformatted to capture critical information. Course instructors must also ensure that all participants complete the forms. These forms should be designed to enable direct data entry into the computer for future reference. The data should include information on computer knowledge levels and skills, experience, ownership and use.
3. A situational analysis of computer use should be conducted for planning purposes. This analysis should provide information on computer-related problems faced by residents of the rural community such as schoolchildren, youths, housewives, farmers, Village Development and Security Committee members, and village labourers. This information would be useful for the design of programmes that meet the needs of the community based on the residents' experiences, education levels and interests.



4. The *Medan InfoDesa* (MID) for example, should have a number of computers for participants to use in order to practice their newly obtained knowledge and skills, and which the community in general can use as part of its daily activities. Rural computer purchase schemes through easy payment can be made available to local communities. Apart from making computers more accessible, the curriculum must be designed to incorporate ideas for possible computer use in everyday life. Functions such as managing household finances, correspondence, information search, data management and retrieval, and learning are some of the possibilities to be considered. These aspects of computer use must be designed to fit the rural scenario and needs.
5. The curriculum has to be designed for two different types of participants: those who will actually use computers on a daily basis, and those who are seeking a general exposure to the topic.
6. Course instructors must have an understanding of adult education philosophy, principles and delivery techniques. The technical knowledge of the instructors has to be combined with an awareness of learner needs and experiences. Understanding the principles of adult education can improve the teaching of the course.
7. Courses organized by the various agencies such as the INFRA, KEMAS, and others, as well as NGOs, must be co-ordinated to enable the effective use of resources. There have been instances where the same participant has attended similar courses organized by other agencies.
8. The INFRA advanced course for developing computer trainers should be given emphasis through meticulous planning, implementation and evaluation. Participants with the potential to train others should be selected. These trainers are to be mentors and instructors in their own villages. If the programme is successful, much of the INFRA effort in providing basic training can be taken over by these trainers. The agency can then focus on other aspects of ICT development.

### *Sustainability issues*

The computer literacy training programme organized by the INFRA is an exemplary continuing education programme for the development of ICT capability in marginalized and underserved rural communities. The programme can be used as a model approach for agencies entrusted with the development of rural communities. It has succeeded mainly because of the Government's commitment to ensure that rural communities will not be left out in the development of ICT. This commitment is demonstrated by the extensive allocation for ICT development in the rural areas. For the *Medan InfoDesa* (MID) programme, the Ministry of Rural Development has allocated RM 17.2 million under the Eighth Malaysia Plan for 2001 until 2005. MID activities include training programmes such as the computer literacy training, MID management courses at the district level, courses for local computer trainers, courses on computer servicing and repairs, an Internet surfing course and ICT entrepreneur development courses.

Other courses that have been planned for the MID programme are guided by the positive response to the computer literacy course implemented earlier. Similar courses on computer literacy organized by other agencies have replicated the INFRA courses. The replication of these courses has to be done wisely with contextual situations taken into account. The computer literacy course organized by the INFRA is also part of the national agenda in the development of ICT. The Government supports this course through liberal funding and by ensuring that training institutes that conduct the courses have sufficient resources such as facilities and instructors.

We expect that the activities associated with such an extensive programme will continue for a number of years. There are about 6,000 Rural Vision Movement villages that require their Village Development and Security Committee members to be trained in ICT. For example, assuming that three committee members



have to be trained from each village, then there will be 18,000 people who will need to attend the course. If one institution conducts 19 computer literacy courses per year, with 26 participants per course, then all 18,000 people can only be trained in 36 years. This is an insurmountable figure that renders the programme absurd if only one or even a few institutions were to undertake the effort. Thus scrupulous planning is necessary to ensure that local trainers are made available for the undertaking.

Uncertain economic conditions further necessitate the requirement of proper planning. There is no guarantee that the financial allocations can be sustained in the future. Hence, to determine that rural ICT development can be realized, a detailed study of the strategies, approaches and programme scope has to be undertaken.





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