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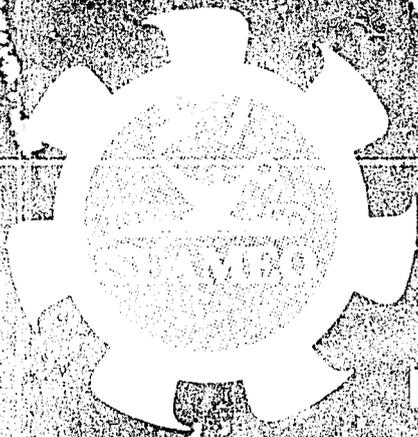
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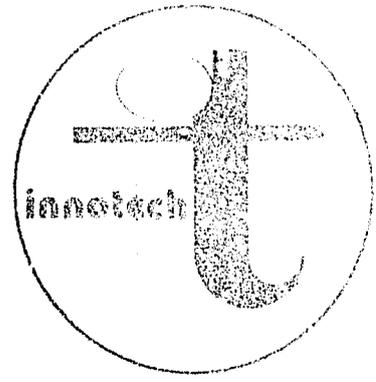
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REGIONAL CENTER
FOR EDUCATIONAL
INNOVATION AND RESEARCH

USE OF
COMMUNITY RESOURCES
IN PROVIDING LOW COST
PRIMARY EDUCATION

A REGIONAL SEMINAR



November 1973

INNOTECH REGIONAL SEMINAR
ON
USE OF COMMUNITY RESOURCES
IN PROVIDING LOW COST
PRIMARY EDUCATION

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PREFACE

Background

One of the major functions of SEAMES is to make continuous study and assessment of educational development needs in the SEAMEO region and to develop educational plans to meet these needs on a regional basis. The Fifth SEAMEC Conference in Kuala Lumpur in January 1970 underscored this function by suggesting that the Organization should undertake to study prevailing educational problems and needs in Southeast Asia in order to determine priority programmes for the seventies. In accordance with the Council's directives, SEAMES took steps to plan for the seventies, by first holding a series of staff meetings and subsequently by convening a Brainstorming Session in Bangkok in September 1970, where top-notch educators from the Southeast Asian region assembled to identify major areas of concern in education in the member countries. The proposal to hold a SEAMEO Regional Educational Planning Seminar as a further step towards the development of educational programmes for the seventies was approved by the Sixth SEAMEC Conference in Saigon in January, 1971. The ultimate purpose of this Seminar was to recommend programmes which could be implemented by SEAMEO within the next decade. The Seminar, held in Bangkok from 26th to 30th April 1971, came up with sixteen proposals under eight broad areas as follows :

1. Primary Education
2. Educational Administration and Management
3. Educational Innovation and Technology
4. Non-Formal and Adult Education
5. Vocational/Technical Education
6. Teacher Education
7. Population Education
8. Evaluation of SEAMEO Projects

The Regional Educational Planning Seminar also recommended that a Technical Working Group be convened by SEAMES, to be responsible primarily for refining the above-mentioned project proposals.

The Technical Working Group came up with four project proposals subsumed under «The SEAMEO Educational Development Programmes for the 1970's», to be considered as part of a more comprehensive «SEAMEO Plan for the Seventies» embracing all activities of the entire Organization. «The SEAMEO Educational Development Programmes for the 1970's» was subsequently approved by SEAMEC.

It was the conviction of the Technical Working Group that in addition to the programmes of the existing Regional Centres, the four projects which were proposed represent educational programmes of high priority which should warrant the support of all those interested in the furtherance of education in the Southeast Asian region. One of the two priority projects assigned to INNOTECH was The Development of An Effective and Economical Delivery System for Mass Primary Education.

A Regional Seminar in Singapore was held on the topic by INNOTECH in mid-February 1973 with the following stated purposes :

1. Exchange information about key programmes in the delivery of primary education.
2. Elicit ideas from a select committee of participants on potential directions that the INNOTECH research programme could take in relation to this problem.

Dr. Sudjono D. Pusponegoro, SEAMES Director, said in his message to Seminar participants that « the original scope for INNOTECH is so vast and all-embracing that it has become incommensurate with its resources and capabilities. The proposed concentration upon seeking solutions for the problems of mass primary education will give INNOTECH a clear direction in which it can move. »

Mr. Ly Chanh Duc, the Center's Director, in turn, reminded attendees of the challenge from Andre Gide who said that « Man cannot discover new oceans unless he has the courage to lose sight of the shores ».

Twelve papers were presented at that Seminar by persons from the SEAMEO region and by guest speakers from as far away as Ethiopia, Brazil, United States and El Salvador. One full day was given to a « brainstorming » session of a select committee which was charged with the responsibility of giving direction to the Center's research effort to find solutions to the very difficult problem of mass primary education.

The research staff of INNOTECH, keeping a promise made before the Seminar, examined throughly the wealth of rich ideas coming from that Seminar and produced a first research planning document titled « Setting Priorities for INNOTECH Research on the Delivery of Mass Primary Education. » Included in this document was the original plan that is now being implemented as a field study in the Philippines and Indonesia for the delivery of mass primary education. The concept that is providing the starting point for evolving what we hope is a workable system in these two countries is now called « Project

Impact » (It was originally labelled as the « No more Schools » concept. However, because of the confusing connotations attached to this label — i.e. « de-schooling, de-teaching », etc... — the Seminar Participants decided a new name was necessary. Hence, « Project Impact »).

Inherent in the Center's experimental delivery concept is the use of community resources in ways that will insure effective learning while reducing educational costs. (An excellent description of the concept can be found in the first paper of this report).

The Present Seminar

The topic, « Use of Community Resources in Providing Low Cost Primary Education » serves two purposes :

1. To gather outstanding educators together in an effort not only to learn from their wide experience, but also to evolve new thoughts on the use of community resources through the mutual stimulation brought on through « brainstorming » discussion, and
2. To provide needed insights for the optimum use of community resources in the conduct of field research on mass delivery of primary education.

Approximately 100 educators took part in the seminar which was highlighted by the presentation of 13 papers by invited speakers from 11 countries. These papers are reproduced herein.

We wish to take this opportunity to express our appreciation to all those participating in this very successful Seminar, and would like particularly to thank the speakers for their thoughtfully prepared presentation. Special thanks also are due to two gentlemen who kindly served as guest panelists : Dr. Alec Dickson of the United Kingdom and Dr. Robert Smail of the United States.

PROCEDURES AND PROGRAMME

PROCEDURES

There were four featured speakers on each day, Tuesday, Wednesday and Thursday. Speakers were requested to present to the audience a short 15-minute summary of their papers. All papers were made available to all Seminar participants by 4 P.M. the previous day so that they could be read in advance of their presentations.

After each speaker had presented his or her summary, participants were invited to question or comment. The purpose of this discussion was primarily for clarification and understanding of the papers, and the questioning period was limited to 30 minutes. The panel discussions scheduled for the afternoons provided an opportunity for more in-depth discussions of the topics. The total presentation/discussion time for each speaker in the morning was 45 minutes.

Afternoons were devoted entirely to panel discussions. Panels consisted of the four speakers of the morning plus one invited guest panelist. Dr. Winarno Surakhmad Deputy Director of INNOTECH, acted as Moderator. Topics discussed did not necessarily bear on the contents of the morning's papers; we preferred that topics cover all aspects of the use of community resources and that the «brainstorming» sessions be as open as possible. All attendees were cordially invited to address question to the panel and to give their own thoughts.

Friday morning was a free period in order to give the Center time to summarize the various ideas and inputs which it had gained through the week. In the afternoon, Dr. Winarno Surakhmad presented this summary under the title of «What We Have Learned». This summary engendered further discussions primarily aimed at insuring that the summary accurately represented the results of the Seminar.

PROGRAMME

Monday, 12 November

09 : 00

Opening Ceremony

- Welcome Address by INNOTECH Director
- Message from the SEAMES Director delivered by Dr. Chetana Nagavajara, Programme Development Assistant
- Opening Address by H. E. Phan Quang Dan, Minister of State, representing H. E. the Prime Minister of the Government of the Republic of Vietnam.
- Refreshments

- 10 : 15 Slide-tape presentation of « PROJECT IMPACT »
introduced by Mr. Ouy Van Thon, Acting
Research Coordinator
- 10 : 30 Presentation of Procedures
by INNOTECH Deputy Director
- 11 : 30 Lunch
- 14 : 00-16 : 00 Keynote Address by Dr. Robert Jacobs (Southern
Illinois University), followed by discussion.
- 18 : 30 Reception by H. E. The Minister of Culture,
Education and Youth — 226 Cong Ly St., Saigon.

Tuesday, 13 November

- 08 : 30 Presentation by Dr. Liceria B. Soriano (Philippines),
followed by a short discussion.
- 09 : 15 Presentation by Mr. Nhoeng Nhan (Khmer), followed
by a short discussion.
- 10 : 00 Coffee Break
- 10 : 30 Presentation by Mr. Md. Rashid Bin Md. Nor
(Malaysia), followed by a short discussion.
- 11 : 15 Presentation by Dr. Douglas G. Ellson (Indiana
University.), followed by a short discussion.
- 12 : 00 Lunch
- 14 : 00-16 : 00 Panel Discussion
Panel Members are morning Speakers plus Guest
Panelist, Dr. A. Dickson (CEDO, U.K.)

Wednesday, 14 November

- 08 : 30-10 : 00 Presentation by Mrs. M. Wahjudi (Indonesia),
followed by a short discussion.
Presentation by Dr. B.O. Ukeje (Nigeria), followed
by a short discussion.
- 10 : 00-10 : 30 Coffee Break
- 10 : 30-12 : 00 Presentation by Mr. Bouthong Visaysackd (Laos),
followed by a short discussion.
Presentation by Mr. D.G. Simpson (IDRC, Canada),
followed by a short discussion.

- 14 : 00-16 : 00 Panel Discussion
Panel Members are Morning Speakers plus
Guest Panelist, Dr. R. Smail (RED)
- 19 : 00 Buffet Dinner by INNOTECH Director,
at the Cercle Hippique
116, Nguyen Du st., Saigon

Thursday, 15 November

- 08 : 30-10 : 00 Presentation by M. R. W. Surathavaj Srithavaj
(Thailand), followed by a short discussion.
Presentation by Miss Chong Hoo Tuan (Singapore),
followed by a short discussion.
- 10 : 00-30 Coffee Break
- 10 : 30-12 : 00 Presentation by Mr. Cao Minh Khai (Vietnam)
followed by a short discussion.
Presentation by Dr. D. Klaus (American Institutes for
Research), followed by a short discussion,
- 14 : 00-16 : 00 Panel Discussion
Panel Members are Morning Speakers plus Guest
Panelist, Dr. R. Jacobs (SIU)

Friday, 16 November

- Morning Free
- 14 : 00-16 : 00 Summary : «What We Have Learned» by Dr. Winarno
Surakhmad, followed by discussion.
- 16 : 00 Farewell Tea Party
(Place : Medical Center, 217 Hong Bang St.,
Cholon)
-

KEYNOTE ADDRESS

By

Dr. Robert Jacobs

USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION

by ROBERT JACOBS

People in every walk of life want and are earnestly striving for the feeling of security and self-confidence that comes from :

1. A job at which they can earn a respectable living.
2. A comfortable home in which they can rear a family.
3. An opportunity to engage actively in community life and « be somebody ».
4. Fortitude in meeting catastrophes which are beyond their individual control.
5. Freedom to make choices in matters affecting their daily lives— 'to be masters of their own destinies' to some extent. » (1)

This statement is no less true today than when it was written more than twenty years ago by a committee which was concerned with the improvement of American rural education. And the statement is no less true for Asian societies than for the inhabitants of Western countries.

Throughout the world, in every society, universally it is believed that education is the instrumentality through which the good life described above can be attained. And by unquestioning equating of education and schooling—formal schooling, that is--and by focusing our financial resources and professional energies on the formal school system, we have perhaps unwittingly barred from the good life all those who for one reason or another are non-participants in formal schooling. This fact becomes considerably more dramatic and compelling when one considers that around the world less than half of the youngsters of school age (through age 17) are in school. This holds true in Asia and it is true for the SEAMEO countries as a whole. (2)

1) EDUCATION IN RURAL COMMUNITIES, 51st Yearbook, Part I, National Society for the Study of Education, 1952 : University of Chicago Press, p. 294.

(2) See **An Asian Model of Educational Development**, Appendix A, Paris : UNESCO, 1966 (perspectives for 1965-80).

Vigorous and sincere efforts have been made here in Asia and elsewhere to remedy this potentially explosive exclusion from the good life by pouring more and more resources into the formal school system--building more classrooms, training and employing more teachers, and printing more textbooks--and numerical increases in enrollment have been impressive. Between 1960 and 1970, for example, school enrollments almost doubled numerically. But in spite of this, in Asia, the percentage of school age children in school increased by only 9 per cent. This was brought about by the rapid increase in school-age populations--the age level where the population explosion makes its initial impact.

It is a losing battle. And when the essential information is brought together (population projections, rising costs, available resources for investment in education) it takes little numeracy skill to determine that it is no longer possible--repeat and underline, **no longer possible**--to close the gap between the educational haves and have-nots by following the traditional paths of the formal education system. Very few of the developing countries can ever afford the massive cost of building enough classrooms, training and hiring enough teachers, and printing and distributing enough textbooks to make possible the extension of the formal school system as it is today to **all** youngsters of school age.

SEAMEO planners were concerned with the situation just described when a group of eminent educators from the SEAMEO region met in 1971 to identify educational needs and priorities in the SEAMEO region for the decade of the '70s. Out of this brainstorming session came the basic ideas which led through a succession of planning exercises to the formulation of a SEAMEO program of action for the current decade. High on the priority list of needs for the 1970s and looming large in the SEAMEO program of action for the current decade, a project has taken shape launching SEAMEO into a pioneering, yet determined, effort to develop new delivery systems (alternatives to the present system) which may be more economical and at least as effective as the present system. It was decided to concentrate the effort at the primary level, and the SEAMEO INNOTECH Center was chosen as the instrumentality for carrying out the required research and development work.

Where does one start in breaking new ground? Are there alternative delivery systems which have been successful in other situations and which might be tried in the SEAMEO region? Or can one postulate a «no traditional school» approach and then test the details of the postulated new system? These are questions with which INNOTECH has been struggling for the past several months. More than six years ago at a SEAMEO meeting held right here in Saigon a possible new delivery system was described in one of the seminar papers :

« With exercise of just a bit of imagination, one can pass from questions about assumptions to speculation about a possible future in which the objectives of basic education (literacy skills, basic computational skills, community living skills, and so on) will be implemented and achieved by use of simple, inexpensive, self-instructional packets of materials coordinated with radio or television broadcasts received by learner audiences either in the home or perhaps in a community center. No school as we know that institution today may be required. A completely new kind of institution may merge, replacing both the physical facilities and the concepts which now separate education into elementary and secondary cycles. These institutions of the future will possibly be community education centers for self learning, open to persons of all age groups. They will be equipped with modern learning resources, largely self-instructional and requiring a minimum of professional supervision, enabling learners to achieve educational objectives at a fraction of today's costs, with greater efficiency and in considerably less time than twelve years, the norm established by tradition for the elementary/secondary cycles.» (3)

This very broad and fanciful sketch of a possible future way of carrying out education was refined and revised by INNOTECH recently to focus on education at the primary level and to structure the system with more details. This refined and still fanciful model of a possible new delivery system for mass primary education was entertainingly described in an attachment to the last Newsletter issued by INNOTECH before the move to Saigon at the middle of this year. This attachment, entitled «No More Schools?», has been distributed as one of the seminar papers, and I trust that all of you have read it, for the basic concepts therein are incorporated in the delivery system project to be undertaken by INNOTECH, and the use of community resources, the subject at hand, is a « basic ingredient » of the model. This is **must** reading, if you have not already read it, to prepare yourself for effective participation in this seminar.

Although the model has been described as fanciful, some of the underlying concepts do have precedent. In particular, the concept of education without schools and the assumption that one can rely on the human resources in the community for carrying out some of the work traditionally performed by the professional teacher are not without precedent. In 1951, as a member of a 3-man team appointed to study radio education in Latin America, I had an opportunity to observe a very

(3) Jacobs, Robert, «The Potential of Newer Instructional Media for Educational Development in the Countries of Southeast Asia» **SEAMES Instructional Materials Workshop Final Report**, May, 1967 p. 128

unique « no-schools / community resource utilization » approach to education. Let me read from the unpublished report of that study :

« In Columbia the name « Radio Sutatenza » have a very special meaning to the campesinas living in the remote rural areas. It is for many the medium through which comes the only education they will ever receive. Early each February, instruction by radio begins in some 30,000 radiophonic schools reaching some 225,000 pupils in 900 different rural areas of the nation. Schooling in reading, writing, arithmetic, social science health, and religion is carried on for ten months. A radiophonic school is either a village group or a family unit. In either case, a school is established when the group or unit agrees to buy a radio, hire an **auxiliar**, and follow the lessons. There is no school building or classroom, merely a common gathering place. Except at the broadcasting end, no teachers are involved. The **auxiliar** is a member of the village or of the family unit with at least two years of schooling. He must be able to read, write, and perform simple computations. After selection he is given a short training course and is then ready to carry out instructions received over the radio during each class. He handles materials, collects homework, gives tests and mails them to Sutatenza, and performs other routine tasks. He is supervised by a parish leader who may have up to ten **auxiliars** in his parish. Each pupil who is enrolled is supplied with a set of simple instructional materials coordinated with and supplementing the broadcasts. They are programmed so that their use is directed completely by the teacher in the studio. Students with ages ranging from five to eighty-five are formally enrolled, examined, and ' graduated ' ».

At the time of the survey professional educators were rejecting this experiment because it was not coming up to the «standards» of the formal school system, but the fact is that 225,000 youngsters at that time were getting **some** education to replace **no** education, and were getting it without schools and with the help of the resources at hand. I make this point at this time to try to encourage an open mind regarding the possibility of the community and its resources performing functions traditionally thought to be the sole purview of the school and the professional educators.

Since the utilization of community resources is a key element in the new delivery system to be tested by INNOTECH, it is certainly appropriate to subject the concept to thorough scrutiny. It is precisely for this purpose that this seminar has been organized. What is a community resource ? What are some of the obstacles to be overcome in using community resources ? Where does the professional educator fit into the picture ? What educational resources not now available will

have to be provided to make the use of community resources effective? These and many other questions are to be brainstormed at this meeting. Rather than try to deal specifically with any of these issues, I have chosen in this kickoff paper to try to make some general observations which may help move the deliberations toward useful seminar products — useful in terms of getting INNOTECH on the right track in experimenting with the use of community resources in providing low cost primary education.

1. First of all, it will help if we can shift our focus from the teacher to the learner and from the process of teaching to the process of learning. Being concerned with how well a lesson is taught all too often obscures the more significant question--what has been learned? And in the deliberations at this seminar, focus on the process of teaching can create misleading concerns about the use of non-professional resources, obscuring the fact that a great deal of learning is taking place constantly in the daily experiences of any youngster--experiences which are not managed by the professional teacher. In our preoccupation with curriculum and planning of formal school activities it is not difficult to make the mistake of believing that everything that the child is to learn (at least everything worthwhile) has to be taught in the school. It is disconcerting to many educators to suggest that most of the total learning accomplished by any individual occurs outside the formal school system. Yet this is quite true. And to recognize that fact--to think of the child as a living and thinking organism interacting daily with an environment filled with a wide range and variety of learning resources--is to open new possibilities when one talks of alternatives to the present system of «delivering» education. In the «No More Schools?» paper the news reporter was told by villagers time after time «Our concern is not with schools, it is with the education of our children». This is another way of saying what I am trying to suggest. Schools and teachers are means to an end --- and that end is **learning**. It will help if we can keep a common focus on that end. In so doing we may be able to recognize, for example, that a village artisan completely untrained in the secrets of pedagogy can become an important resource in a particular learning experience for a particular individual. But if the focus is on the teacher and the process of teaching who indeed would want to turn over teaching responsibilities to the «untrained» artisan? I seem to be laboring the point, but I believe it is important — let's keep our concern focused on learning — on the education of our children.

2. I believe it would be helpful, as a second observation, to try to think about use of community resources within a «no-schools» context. For many years community development efforts have sought to tie the school more closely to the community, and, in fact, a great deal has been learned about the use of community resources through these efforts. Particularly in rural areas, education has been made

more relevant to community needs and there has been broader participation of many components of the community in the affairs of the school as a result of community education and community development programs. A lot of time could be wasted at this seminar in re-hashing this experience which assumes either the existence or the creation of a formal school which is central to the educational effort, however modified to suit the local community. But INNOTECH is interested in testing the « no-schools » concept--in exploring the utilization of community resources as part of a delivery system which does not include schools as they now operate. Using community resources for education of the young without a school poses different kinds of questions than those involved in using community resources to enrich a formal school program. It is this different set of questions that needs to be addressed if the seminar results are to be really useful to INNOTECH in carrying forward the delivery system work. Agreement on this guideline will involve acceptance--at least for the moment of this meeting--of the notion that education and learning can take place without schools. But unless we can do this at least on a hypothetical basis we can waste time on irrelevant questions and in the process ignore questions which ought to be asked.

3. Third, I believe it is important to keep in mind that learning resources in any community are already operative and have been for centuries. I can recall my wonder and amazement when I first came to Asia some 17 years ago upon seeing everywhere very young children (primary school age or younger) carrying out tasks that were performed in western societies by those much older -- usually by adults. It is commonplace in Asia to see small children caring for younger brothers and sisters, herding buffalo, doing shopkeeping or hawking merchandise in the streets, hiring themselves as guides to tourists, working at woodcarving or metal handwork. Many of these youngsters do not have time to go to school — **and none of them learned any of these things in school.** So how did the skill transfer, the development of work habits and attitudes, and the knowledge about the environment take place? Obviously, the learning resources at hand — in the home and in the community -- brought this about. In our alarm and apprehension about assigning some of the tasks and functions traditionally performed by the school and the teacher to other institutions and other persons in the community we can overlook the fact stated above — that such resources are already fostering learning. If we approach our discussions as though we are proposing to thrust inoperative elements in the community into educative roles which they have never before performed, alarm and apprehension are natural and probably justifiable reactions. On the other hand, if we recognize the currently functioning characteristic or property of existing community resources (all being part of the child's total learning environment), the creativity in the job we are undertaking may become that of

devising ways to refine, redirect, undergird, coordinate, and otherwise shape into a meaningful, goal-directed, total learning system, the resources in the community which are already generating learning. It might be guessed, for example, that some of this currently generated learning is desirable while some may be undesirable, depending upon the goals which are set. And this is where refining and redirecting would come into the picture.

This particular observation is of sufficient importance, it seems to me, to spend just a bit more time with it. In particular, it may be useful in getting at substance in our discussions to identify some of the non-school resources found in almost any community already functioning as generators of learning.

(A) The resource which would probably be first on almost anyone's list is the home and the family. The well established authority of the parents and the influence of brothers and sisters and other relatives in the immediate home form probably the most powerful learning influence in the life of any individual. The ability to communicate with others (spoken language), for example, is learned in the home. Basic attitudes, values, and beliefs are learned in the home and usually change very little from this early learning throughout the life of the individual. Often skill as an artisan is passed from parent to child through a kind of family apprentice system. One learns much through the home and family in any society. After studying the foundations of education in four separate ancient societies, the noted British educator, Professor E. B. Castle concluded :

« From the enduring quality of the Jewish family, from the failures as much as from the successes of Greece and Rome comes the hard truth that it is in our homes that children first learn what to want and what to admire, what is important and what is trivial, what has quality and what is shoddy, and these things are the roots of education». (4)

In our discussions when we talk about parents assuming certain responsibilities for the education of their children in the «no schools» community, we should keep all this in mind.

(B) A second institution functioning as a learning resource in most Asian communities is the religious body. This counterpart of the church in western societies has a strong influence in molding moral values and basic beliefs about the nature of life and living. In many communities, formal or semi-formal instruction is carried on by the monks or priests. In some communities these religiously oriented temple schools are the only formal educational facilities available. The religious unit, whatever form it may take, is an already functioning community

(4) Castle, E. B., *Ancient Education and Today*. Baltimore : Penguin Books, 1961. P. 190.

resource which could have an important role in a total community no-school learning system.

(C) Community activities form a third already operative learning resource which can be meshed into the «no schools» delivery system. Festivals and seasonal observances, drama and music, collective work activities, all provide learning experiences. The impact of Chinese drama on forming moral values, for example, developed around themes of courage or piety or chastity, is probably more profound than we realize. Community activities have potential for fostering learning which we must consider.

(D) A fourth resource to be considered, already functioning in a dynamic manner, is the peer group and peer relationships. Children learn much from their own age group — from buddies and close friends, from siblings and other relatives, from play groups and gangs. Much of this learning is spontaneous and undirected — some of it is undesirable — but whatever its nature it is effective. It is a learning resource that begs to be used in shaping a total community learning system.

(E) Fifth, although absent or only partly operative in many Asian communities, there are enough situations where mass media are functioning to warrant consideration of this resource as part of a no-schools delivery system. Radio is probably the most commonly used media. There are few communities indeed where one cannot find transistor radios in use. And there are many communities where other mass media are operating — newspapers and magazines, television, and the cinema. The powerful influence of these media on learning of all kinds — again it is often undesirable learning — has been amply demonstrated. And it would be unwise to overlook an instrumentality through which hundreds or even thousands of individuals can be reached with a single message. Indeed, in spite of its irregular appearance as a community resource when one seeks commonality or universality, mass media must be listed as one of the resources we should examine.

(F) Sixth, in any community there are skilled workers and artisans who are carrying on their jobs. The farmer knows a great deal about farming, the «repairman» knows how to fix things, the woodworking craftsman knows carpentry, the weaver, the tailor and the seamstress know a lot about textiles and making clothes. These people make their living by practicing their trades, not by teaching them, and as a learning resource they presently function as «teachers» ordinarily only within the home and family circle. But they do have skills and practical knowledge which could constitute a learning resource of considerably broader utility if the right mix of motivation, compensation, and time scheduling

can be created to bring them effectively into the total community learning system. And in planning ways to achieve those primary school objectives which are addressed to vocational preparation, this resource certainly must be considered.

(G) Finally, in my illustrative list, let me suggest a category of « Miscellaneous Organizational Units » as a seventh resource to be considered. Because of national interest in community development, health and nutrition, and improvement of rural life, found in varying degrees in all of the Asian countries, there are now in most communities field units carrying on specialized work in such areas as family planning, community health, agricultural extension work such as the SEA-RCA Social Laboratories, Scouting or 4-H work, community development, marketing cooperatives, etc. The number and nature of these miscellaneous units vary from community to community, but in the plan for a total learning system to serve the community, these can be potent resources for accomplishing some of the educational aims. Wherever they are found they are certainly now operating as generators of learning, probably dealing with adults more than with school age children. But they have the advantage of being funded from non-education budgets, and they are usually staffed with professionals. They have potential not only for carrying out part of the primary education tasks, but also for serving as a resource to help with the training and preparation of other resources (parents, artisans, peers, etc.) to carry out their roles in the total learning system. These miscellaneous organizational units must be taken into account.

I have dealt with this third general observation in such detail that I may have diverted from my initially stated intention to make a few general observations that might help move our discussions toward practical results. I have three more such observations to present, so may I now move on to the fourth :

4. In addressing a topic such as the subject of this seminar it is easy to drift off into theoretical, academic issues which are by-paths to the main road. While it is interesting and perhaps intellectually stimulating to debate theoretical and philosophical considerations, this exercise has been carried out in the brainstorming and planning which led to the SEAMEO decision to develop an alternative delivery system for mass primary education. The challenge now is to get on with the job. So my fourth general observation is that if we can avoid re-hashing the theoretical issues which have already been examined thoroughly and keep our efforts focused on realistic, practical issues and considerations, the seminar is likely to be much more successful in arriving at conclusions and recommendations which will help INNOTECH in going forward with the task assigned by SEAMEO. The present situation with regard to so-called non-formal education illustrates very well what I am trying to say. Since this new educational label was coined educators around the world (who incidentally know much more

about formal education than about non-formal education) have spent more time and energy in trying to define the new term and in talking and writing about non-formal educational theory than in either broadening the base of learning resources outside the school or utilizing more effectively the resources already being used. As a result, the treatment of so-called non-formal education to date has been simply an exercise in trying to design fancier and fancier new bottles for old wine, with very little change in the wine itself-- if indeed it needs changing. While I would be the last to cast aside philosophical rationale for any given endeavor I would suggest that we do not have time to repeat work already done-- to re-debate theoretical issues already covered, if we are to come up with practical suggestions about the utilization of community resources in providing low-cost primary education in the SEAMEO region.

5. My fifth observation concerns sensible steps to follow in working the use of community resources into the matrix of the total plan or system for implementing primary education without formal schools. As I see it, the steps shape up generally as follows :

(A) The first step is to decide what is to be learned. One cannot talk about use of community resources meaningfully unless there are clearly stated learning goals and generally agreed upon procedures for reaching these goals. Educational or instructional tasks can then come into clear focus and one can talk sensibly about utilization of community resources in accomplishing these tasks. But the goals must be there. Recently I had an opportunity to examine an interim report prepared by the International Council for Educational Development for UNICEF's executive board on the topic of « Non-formal Education for Rural Development.» It is unfortunate that this report has had limited distribution, for much of its substance has bearing on issues to be dealt with in the mass delivery system project. With reference to the first step I have suggested, I want to quote from a small section of that report dealing with minimum essential learning needs :

«To size up the educational requirements of children and youth in any rural area and to plan provisions for meeting them, one must first have a clear and realistic conception of the **minimum essential learning needs**. Hence the starting question is : What educational needs should be fulfilled by one means or another for **all** boys and girls before they assume the full responsibilities of adulthood ? Without a clear and detailed answer to this question, the assertion that every child has a «right» to an education has little practical meaning. This 'right' must be translated into terms of some 'minimum package' of attitudes, skills and knowledge that every young person in a given society requires for an effective and satisfying adulthood. Many young people may achieve more than this minimum, but any

societies guided by democratic ideals must give a high priority to securing at least this minimum for all. To do otherwise is to create a privileged elite at the sacrifice of everyone else.

«This «minimum package» would doubtless differ considerably from one rural area to another (between and within countries) to allow for great variations in the factors that influence social, economic and political development. It would also vary according to what over-all goals each society sets for itself : the task for each individual country is to specify the ingredients in such a minimum learning package against the larger question of «education for what »?

«Yet despite the very diverse needs and environments of different rural societies, there would probably be agreement among most educational leaders that, in more general terms, the package should include at least the following interdependent elements, all of equal importance. These six elements are suggested as illustrative of a minimum package ; each nation and community must, of course, translate these essential learning requirements into their own precise and operationally applicable terms.

«(1) **Positive attitudes**, towards co-operation with and help to one's family and fellow men, towards work and community and national development, and not least of all towards continued learning, and towards the development of ethical values. Such attitudes should find concrete expression in one's daily behavior in the family and the community. at work and in all learning environments.

«(2) **Functional literacy and numeracy**, sufficient (i) to read with comprehension a national newspaper or magazine, useful agricultural, health, and other 'how-to-do-it' bulletins, for manufacturers' instruction sheets; (ii) to write a legible letter to, for example, a friend or to a government bureau requesting information ; and (iii) to handle important common computations--such as measurement of land and buildings, calculation of agricultural input costs and revenues, interest charges on credit, and rental rates on land.

«(3) **A scientific outlook and an elementary understanding of the processes of nature** in the particular area, as they pertain, for example, to health and sanitation, to raising crops and animals, to nutrition, food storage and preparation, and to the environment and its protection.

«(4) **Functional knowledge and skills for raising a family and operating a household**, including the essential elements of protecting family health, family planning where appropriate, good child care, nutrition, and sanitation ; cultural activities and recreation ; care of the injured and sick ; intelligent shopping

and use of money; making clothes and other consumption goods, house repairs and environmental improvements; growing and preserving food for family consumption.

«(5) **Functional knowledge and skills for earning a living**, including not only the skills required for a particular local occupation, but also a knowledge of a variety of locally useful common skills for agriculture and nonfarm use.

«(6) **Functional knowledge and skills for civic participation**, including some knowledge of national and local history and ideology, an understanding of one's society; awareness of government structure and functions; taxes and public expenditures; available social services; rights and obligations of individual citizens; principles, aims and functioning of co-operatives and of local voluntary associations.⁵

In order to avoid the upheaval of trying to modify published and accepted primary school objectives in the pilot situations where the INNOTECH project will be implemented, it may be necessary to simply accept the objectives as they now are and proceed with the development of educational tasks and use of community resources in carrying out these tasks to work toward the existing objectives. If possible, it would be much better to attempt to work out a set of meaningful, life-skill oriented objectives which do take into account the minimum essential learning needs of children and youth in the world of today. But however the matter of objectives may be dealt with, the first step in working out a new learning system and in determining effective use of community resources is to fasten these objectives in a prominent place where they can be a constant reference point in working out the details of the system.

(B) The second step will be to determine what resources are available and which of these can be used in the learning system. The range, the nature, and the quality of resources will vary from community to community. In a given pilot or experimental situation it will be necessary to make as complete an inventory as possible of the resources at hand and to consider for each the particular restraints in that situation which will determine the suitability and/or availability of the resource for involvement in the no-schools learning system.

(C) The third general step will be to determine what is required to use the identified resources effectively. It is under this general step that I would place the activity of instructional materials development. The instructional

(5) «Non-Formal Education for Rural Development: Strengthening Learning Opportunities for Children and Youth,» Interim Report Prepared by the International Council for Educational Development, United Nations Children's Fund, February 8, 1973 (distribution limited) PP. 15-17.

materials will in large measure determine the kind of training needed to use community resources, and it is the instructional materials that will figure largely in matching resources and educational tasks. Effective, programmed instructional materials (learning modules) will unquestionably be required to use community resources effectively. Under this step, also, it will be necessary to determine the kinds of resource training which will be required, And, thirdly, as part of this step, the administrative, organizational, and financial arrangements required to use the resources effectively will have to be determined.

(D) The fourth step will be to determine what new resources are needed in order to complete the learning system. One could not expect to find in any given situation all of the resources needed to carry out all of the educational tasks involved in attaining the stated educational goals. The particular addition to the mix in any given situation will have to be determined. Beyond this, it will probably be necessary to provide some sort of a central « home » for the learning system. Something approaching the community learning center concept mentioned in the earlier paper may be required, operating something like a public library, but with a much broader range of learning resources. These suggestions are illustrative only. The essential thrust of this step would be simply to determine what resources not presently available would be needed to implement effectively the new learning system.

(E) The fifth step will be to match resources and educational tasks. Specific educational tasks will evolve from the activities selected as the most effective ways of achieving educational goals. Available resources undergirded by the steps required to use them effectively form a pool of instrumentalities for carrying out or performing the educational tasks. This fifth step, then, is simply that of matching tasks and resources so that there is optimal utilization of the pool of resources and effective implementation of each of the tasks.

(F) I would suggest designing an evaluation scheme as the sixth and final step in my list. Evaluation must be a continuous process throughout the entire activity. Evaluation should be designed so as to provide immediate feedback leading to any necessary adjustments or refinements in any part of the total system. For example, matching of resources and tasks is at first an arbitrary undertaking. The results of evaluation may indicate mismatching which needs to be adjusted. There may be «bugs» in the instructional materials (learning modules) which need to be removed. The initially designed training program may have overlooked certain basic requirements which show up as deficiencies in effective utilization of resources. These are but a few of the operational elements in the system which will require constant review and adjustment. Additionally, evaluation must be designed so as to provide longer range determinations. Is the total system working? How do costs

compare with costs of operating a formal school delivery system ? Are the learners in the system adequately prepared to go on to secondary education if such additional schooling is sought ? Evaluation must be carefully planned at the outset if it is to usefully serve these immediate and long range purposes.

I believe this list of steps includes most of the things that need to be done in working out a plan for effective utilization of community resources in the low-cost primary education delivery system which is the hoped-for product of the INNOTECH project under review. The ordering of the steps might be re-arranged, but these are the essential things to be done.

6. My sixth and final observation concerns obstacles which will be faced in attempting to carry out a transfer of responsibility from the formal school to resources in the community. I suggest these simply because I think it is sensible to keep obstacles and points of resistance in mind as one tries to work out practical suggestions for educational change. It seems to me that there are at least four general obstacles which can be anticipated :

(A) Parents will resist the development of substitutes for formal schooling. The traditional equating of education and formal schools has created deep-seated feelings on the part of most parents that unless their children are enrolled in formal schools they are being cheated of their educational opportunity. It will not be easy to win parents away from their suspicions that their children are being treated as second class citizens educationally if they do not have schools to attend.

(B) Most educators will scoff at the bold suggestion of carrying on education without schools. Part of this comes from the threat they feel to their careers; part of it comes from professional conviction that education as it has been carried out is really the best way to teach children. Resistance can be expected from the professional educators.

(C) Costs can get out of hand, There are, of course, costs involved in carrying out trial and experimentation which would not be involved in regular implementation of an accepted system, We are concerned, of course, with the continuing costs--such items as the level of pay established community resource persons, the cost of the required administrative, supervisory, and coordinative staff, the cost of learning modules and other instructional materials, the cost of any mass media which are utilized, construction and maintenance costs of any facilities which may be required, and so on. Costs can get out of hand and this potential difficulty should be kept in mind.

(D) Coordination and supervision will be difficult. In the formal school approach most of the elements in the learning system are controlled by the teacher.

In the new delivery system which is to be investigated responsibilities will be widely dispersed. The learner himself will take on many of the responsibilities traditionally handled for him by the teacher ; parents will have certain responsibilities ; other persons and institutions in the community will assume certain responsibilities. While this broadens the base of learning resources in constructive ways, it at the same time creates difficult problems of coordination and supervision in directing the entire system towards the achievement of set objectives. There will need to be a great deal of flexibility, creativity, tolerance, and organizational and executive capability brought to bear in dealing with this particular problem. I suggest this as an obstacle simply because there are inherent and inevitable constraints to effective coordination in a situation of widely dispersed responsibilities.

Since I have made these observations with a view toward stimulating and guiding the discussions into practical channels, it may be helpful to try to summarize in outline form what I have said. This is done in the final section which follows.

S U M M A R Y

Background

1. Adequate resources are no longer available to pay the cost of providing adequate education to all children of school age using traditional approaches to formal schooling.
2. New delivery systems for education and alternatives to « formal schooling » as it is now operated are required.
3. SEAMEO has decided to move in the direction of new delivery systems at the primary school level and INNOTECH has been assigned the responsibility of carrying out this work.

General Observations

1. The focus of the seminar discussions should be on the learner and the process of learning rather than on the teacher and the process of teaching.
2. The principal concern of the seminar is not with enriching formal schooling with supplementary use of community resources--but rather with using community resources effectively in a situation where there is no formal school.
3. Community resources are already operative as learning resources. Among these resources are the following :

- A. The home and family.
 - (1) Established parental authority.
 - (2) Brothers, sisters, and other relatives in the home.
 - (3) Family apprentice system.
 - B. Religious institutions.
 - (1) Rituals and religious practices.
 - (2) Temple/church schools.
 - C. Community activities.
 - (1) Festivals and seasonal observances.
 - (2) Drama, dance and music.
 - (3) Collective work activities.
 - D. Peer group and peer relationships.
 - (1) Buddies and close friends.
 - (2) Siblings and other relatives.
 - (3) Play groups and gangs.
 - E. Mass media.
 - (1) Radio.
 - (2) Newspapers and magazines.
 - (3) Television.
 - (4) Cinema.
 - F. Skilled workers and artisans.
 - G. Miscellaneous organizational units.
 - (1) Community development center.
 - (2) Health clinics.
 - (3) Family planning units.
 - (4) Agricultural extension officer.
 - (5) Social laboratories.
 - (6) Rural cooperative units.
4. Avoid preoccupation with academic, theoretical, and philosophical issues thoroughly discussed in preceding SEAMEO meetings and planning exercises ; accept fact that the implementation stage has been reached on the development of a new delivery system for mass primary education, and focus on practical issues.

5. Steps to follow in effective utilization of community resources in a total community learning system :
 - A. Decide what is to be learned. Define goals clearly and prepare to use as a constant reference base.
 - B. Determine what resources are available.
 - C. Determine what is required to use identified resources effectively.
 - (1) Instructional materials development.
 - (2) Training.
 - (3) Administrative, organizational and financial arrangements.
 - D. Determine what new resources are needed.
 - E. Match available resources with educational tasks to be performed.
 - F. Design an effective evaluation plan for providing both immediate and long-range feedback.
6. Keep potential obstacles in mind.
 - A. Resistance from parents.
 - B. Ridicule from professional educators.
 - C. Costs getting out of hand.
 - D. Inherent difficulty in coordinating widely dispersed responsibilities.

WORKING PAPERS

PHILIPPINE INTEGRATED APPROACH TO PRIMARY EDUCATION

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Education systems in developing countries have long been nagged by the problem of how to effect economical and effective delivery of mass primary education. Their burgeoning school populations without adequate budgetary provisions for enrolment increments make imperative bold and innovative approaches to the problem.

Conceptual Framework

Current views of youngsters and their elders of schooling, the observations of erudite pedagogical critics of what the schools have failed to accomplish, an analytical look at the realities of public education, and an understanding of the learning process suggest that approaches to the problem must provide for community-based learning, harnessing all appropriate resources available in a community.

To assure satisfactory results from an educational set-up which optimizes use of community resources, it would be necessary to (1) deinstitutionalize the school to some extent (2) redesign the curriculum and revise and enrich materials of instruction, (3) restructure class organization, (4) adopt imaginative and effective ways of meeting the individual needs of learners (5) redefine the roles of the teacher and the administrator and train them for efficient performance of their roles, and (6) orient the whole community on the new set-up.

Most of the learnings that both the young and adults consider important for survival in a rapidly changing world have been acquired through influences outside the school, i.e., forces in the community.

In recent years the community has emerged as the most vibrant educative laboratory within the reach of every learner. It is the most promising medium for spanning the gap between what the learner knows and what he does.

Optimum use of its resources offers a potent approach to cutting down costs for primary education in developing countries, where funds for education are scarce, and to infusing it with relevance.

A community-based education broadens the concept of the classroom to subsume the entire world of the learner. Such an expanded notion of the classroom erases the line which has been drawn between schooling and education and makes possible delivery of the kind of education demanded in a world undergoing precipitously rapid change.

Full exploitation of community resources in education requires the de-institutionalization of the school to some extent. The process of partially deestablishing it starts from the «breaking down of its walls» as the people in the community are drawn into the educational process. As they gravitate to the school, they correspondingly draw the learners out to the community. As a consequence, the formal patterns of organization begin to assume informal characteristics, and the trappings of the institutionalized system soon give way to deinstitutionalized forms. The school becomes more and more in, for and of the community, bereft of certain rigid structures that normally characterize it.

Such a manner of partially deschooling the educational process forestalls the dislocation of the school and assures ready acceptance of the change by the community. The integration of the school and the community thus becomes a painless process, which augurs well for its viability.

A partially deinstitutionalized school makes more feasible than the traditional structure the adoption of imaginative ways of individualizing instruction and maximizing the utilization of community resources, thereby assuring optimization of learning.

Maximum use of human and material community resources may be both the goal and the result of a restructured curriculum. It demands more relevant materials of instruction than ordinarily required. The restructured curriculum should reflect the relationship between in-school and out-of-school reality and consider individual growth in the context of the values cherished by the society in which the school is embedded--values which equip the learner not only for coping with the norms of society but also for altering them when there is necessity for it.

The expansion of the classroom to include the community and its resources has certain implications for the teacher. Her role changes as she embraces a community-based education. Obsolescence of the tools of her trade becomes ineluctable.

Since the textbook has yet to see print which adequately treats on all aspects of the community, she must develop competence in exploiting the community resources as purveyor of knowledge and as springboard for meaningful experience for the development of life skills. This means that she should be a per-

ceptive and competent curriculum developer. She should also be a skillful diagnostician of student's needs, a rational decision-maker in determining the direction and focus of study, and a precise evaluator of the instructional process and the growth of the learners. The new role of the teacher demands a great measure of versatility which only appropriate and adequate training and time can bestow on her.

The administrator should likewise sharpen the tools of his trade. He needs to strengthen his faculties for crap detection, i.e., for spotting breakdowns in the newly installed system, and increase his competence for providing stimulating and enlightened supervision so that he will be capable of guiding and helping the teacher achieve desirable outcomes vis-a-vis specified objectives.

The foregoing conceptual framework undergirds the approach proposed here for providing low-cost but effective primary education through the optimum use of community resources.

The « Philippine Integrated Approach »

The class organization, curriculum materials, techniques employed and community resources that characterize the approach make the name " Philippine Integrated Approach " (PIA) appropriate for it.

The in-school portion of its name subsume all the educative activities that are undertaken in the school within the framework of institutionalized practices ; the "of-school" part involves those that are deinstitutionalized and thus non-formal. The approach is partly deinstitutionalized and partly institutionalized since all non-formal activities of learners in the home or community are contiguous with in-school learning.

Organization. Fifty pupils are assigned to each teacher ; 25 (Group A) report to her for in-school or formal instruction for one week while the other 25 (Group B) undertake off-school work. The following week, Group B reports for in-school instruction while Group A does off-school work.

Throughout the year, this alternate in-school-off-school pattern is adopted. Thus, where schoolrooms and teachers are not adequate, a teacher may be assigned even between more than 50 and 80 pupils a year, since she meets only half of the number at one time.

When children enter school for the first time, and at the beginning of each school year, they go through a series of evaluative activities to determine at what level to start in the different subject areas of the curriculum, namely, communication skills, computational skills, social studies, health and science, work education, music, arts and physical education.

Beginning learners who have been taught by their parents or elders at home are expected to start at a level higher than those who have never received the benefits of home training.

As in modularization, the scheme exemplified in the INNOTECH Newsletter article entitled «No More Schools?» the learners are not classified or paced according to grade levels but in terms of the learning tasks they have successfully performed. For example, in computational skills, a beginning learner may begin with Learning Task¹⁰ while his peers may begin with Learning Task¹ simply because they have had absolutely no earlier training in numeracy.

The Curriculum Materials. Before PIA classes are organized, self-learning kits for the learning tasks in each subject area should be prepared. A complex learning task will rate more than one self-learning kit (SLK) since it has to be divided into its component tasks. For instance, for a difficult computational skill, there may be four SLK's, one for each subtask, to assure reasonable mastery of the task. The fast learner need not go through all the SLK's. He may skip one or two to get to the final one, depending upon his capacity and needs.

A self-learning kit consists of a systematically sequenced material for learning specified skills or information and corresponding source materials, a list of community resources that may be utilized, as well as reinforcement exercises, which allow each learner to work at a rate, style, and level suited to his capacities and learning mode. To be effective, it must be brief and easy to understand, stimulating and challenging, involve activities that require varied media or resources available in the community, and easy to follow. It must be community-oriented but at the same time also oriented to the learners' increasingly expanding world.

To make the SLK's last longer, they should be made of material which can stand long and careless handling. Plastic-covered pages amount to a high initial cost, but are economical in the long run.

It will take considerable time, money and expert effort to prepare SLK's for all the areas of the curriculum. Such SLK's may be developed in curriculum workshops during the summer vacation. To provide adequate incentives for the participation of the most competent teachers in the workshops, service credits, live-in allowances, and credits for promotion purposes may be offered. An important goal is to organize a corps of the best teachers and supervisors available whose task would be the development and continuous revision of SLK's.

Techniques Used. The first in-school meetings of the year are devoted to diagnosis of learners' needs as well as training in the independent use of SLK's which should be highly individualized. Fast learners may assist in training poor learners in the effective use of an SLK.

At the end of each in-school week, learners pick up SLK's for different subjects, ticking off on an individual check list the respective numbers of SLK's they take out for off-school work. They are expected to take out only as many as they believe they can accomplish within the week, with the teacher helping each learner determine how many he should tackle during the week.

While half of the teacher's class is on off-school work, the other half is with her learning in the ordinary classroom structure. The focus of the instruction is on sharpening the learners' tools for learning to learn so that they can be more effective independent learners during off-school hours. Thus, emphasis is placed on reading, writing, speaking, listening, computational, and process skills.

Since the number that meets at one time is small, intensive training in the skills is feasible, especially if mastery learning strategies are employed.

The off-school time of the learner is devoted to individualized learning through SLK's, which may require listening to the radio and viewing TV (where available) lessons, observation and participation in community activities under the guidance of volunteer parents or other individuals, peer learning activities, listening to tapes or viewing educational films, slides and film strips at the community center or in a mobile resource center (if available), apprentice work with community workers or in centers of work.

Since the SLK's are community-based they will invariably require the learner to seek varied specific resources in the community. For instance, for a lesson on community helpers, he will need to visit different workers or places of work and interview and observe people in order to answer question in the SLK. Or to prepare a brief and acceptable report on changes needed to improve his community, he may need to take a study trip around it in and listen to a tape at the community resource center or mobile resource center (if there is one) or tune in the radio at a specified hour for the educational program that deals with the lesson. The schedule of educational programs on TV and radio for a specific period must be in the hands of the learners so that they will have a ready guide. A radio in the community or village center can easily be made available to learners during the hours scheduled for educational broadcasts since it is inexpensive.

The subjects that lend themselves best to purely off-school treatment are social studies, work education, and arts, music and physical education. The other subjects of the curriculum are better taught using a combination of in-school and off-school treatments. However, they may also be effectively taught using purely off-school techniques provided that well-developed SLK's are available. For effectiveness and economy in teaching-learning, the integration of several subjects in one SLK should be a goal.

Especially in work education, use of community resources can be easily maximized and costs for providing systematic and effective training in work skills brought down. In fact, the only in-school activity that may need to be undertaken with regard to work education and, possibly social studies, is checking SLK's turned in by learners and evaluation of their progress, which must be a teacher-learner endeavor. All the other learning activities in these subject areas are undertaken in the community, using appropriate resources to the optimum.

In work education, where all the work skills have been identified and systematically arranged, the learner, with the guidance of his teacher and parent, identifies the community resources from which he may acquire each skill and seeks to learn it from the specific resource. For instance, a child may get training in handling certain implements on the farm from his father, who also guides him in the application of his skills in planting an area with vegetables. The teacher, with the help of the farmer, evaluates his performance and advances him to the next higher learning task if he is ready for it.

Since individual capacities and modes of learning differ, learners will progress at different rates. They pace their own learning and need not experience the humiliation that stems from failure to cope with their peers since evaluation of learner-progress is criterion-referenced rather than norm-oriented.

Community Resources. The indexing of all community resources available for every SLK in all the subject areas and adequate training of the learners in locating and using them are imperative.

The identification of community resources should include the number and location of each. If the resources are human, specific names should be given and, if feasible, the time such individuals have indicated they will be available to the learners.

Community resources may be grouped into (1) human, (2) material, (3) institutional and (4) cultural.

Human resources include individuals and groups that may be able to assist the school in educating the young. They may serve as resource persons or trainers or teaching aides.

Under human resources, may be listed workers who are expert in their line e.g., a very successful farmer and a proficient hand loom weaver, parents and other individuals who volunteer as teaching auxiliaries, students who volunteer for tutorial work, professionals, civic, religious and youth leaders, and even foreign residents in the community who may be useful sources of information about their countries.

Material resources include buildings, parks and playgrounds, facilities, landmarks, machinery, mobile resource centers, electronic equipment, newspapers and other publications, implements and other artifacts that may serve as educational objects or laboratories.

Institutional resources include organizations, associations, corporations or bodies which are established for specific purposes or goals. Among the institutional resources most communities have are churches, clubs and associations, industrial establishments, and the like.

Cultural resources subsume everything that enriches the culture of the people of a community. Under this category fall libraries, museums, dramatic guilds, moviehouses, glee clubs, bands and rondallas, dance troupes, reading centers, exhibits and monuments.

Part of the beginning orientation of the learners should be devoted to activities to acquaint them with the community resources that will be involved in their education. Where A-V facilities are available, training should include the manipulation of projectors, tape recorders, etc.. For the benefit of learners who cannot read well, a system of numbering understandable to all types of learners needs to be adopted. Color may be used to designate materials for specific subject areas to facilitate identification.

Learners should be taught to seek their parents' or kin's assistance before venturing out of the family circle for help. This insures the active participation of their family in their education.

The task of identifying community resources for educational purposes should be shared with parents and other individuals in the community. This requires that they be involved in the preparation of SLK's. While the teachers and supervisors provide the expertise needed in their development, the parents and other individuals in the community can be of great assistance in identifying resources that are appropriate and available for the SLK's.

Their involvement in the process of developing the SLK's serves to orient them on the new set-up and effectively prepares them for wholehearted assistance to the young so that they may be provided education that is responsive to individual and social needs. Proper and adequate orientation of the community helps forestall refusal of individuals to participate in the education of the young. Indeed, the need for orientation of the community on the new set-up, particularly on the partial deinstitutionalization of the school to optimize the use of community resources and to infuse education with greater relevance than usual, can never be overemphasized.

CONCLUSION

The "Philippine Integrated Approach" is addressed to the persistent problem of how to bring down the cost and at the same time bring up the standard of primary education. Since it does not require additional cost but makes the best use of available resources, it is feasible for adoption by any educational system.

It purports to cut cost by accommodating more learners per teacher, maximizing the use of classrooms by utilizing one for from 50-80 learners instead of the usual one for 30-40, and harnessing all available appropriate human, institutional, cultural, and material resources in the community.

All this is made possible through a restructuring of class organization, i.e., adopting an alternate in-school and off-school scheme, a reorientation of the curriculum by making it community-based and developing self-learning kits which are worked out by learners during off-school days, but for which skills for independent study are developed during in-school days, and, most important, developing a climate of acceptance for the innovation among the learners, teachers, other school personnel, parents, and the whole community.

Successfully implemented, the "Philippine Integrated Approach" offers promise of laying a firm bedrock for effective lifelong education since its main thrust is the development of learn-to-learn skills which insure that the learner will be actively involved in their learning and thus, maximize independent learning in and off-school, and life skills and behavior necessary for survival in a swiftly changing world.

Since experience soon becomes practically nil in such an increasingly changing milieu, to be relevant, education must seek to equip learners adequately with the most versatile of all survival skills—the skill to learn by oneself.

USE OF NATIONAL MEDIA PRODUCTION CENTER MOBILE UNITS IN THE SCHOOLS

The National Media Production Center (NMPC) has 130 mobile units equipped with audio-visual fixtures and equipment. The units have been serving the Armed Forces of the Philippine in many instances—showing films regarding what is new in the government. The NMPC would be willing to share its facilities for the purposes of education. This can be arranged on the scheduled basis. An NMPC unit in a school division may be requested to share showing time, or asked to show BPS films to some schools in that division. Other services or sharing arrangements can be :

1. Sharing of NMPC films—This can be viewed in schools ;
2. Movies of NMPC related to education and government can be shown in schools ;
3. Tapes and films on latest educational technology or innovations can be shown in schools were the mobile units are assigned ;
4. Special showing for out-of-school youth and adults ;
5. Upgrading of BPS media staff in terms of handling of equipment as well as communication arts and mass media techniques.

USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION

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The idealistic concept of «no more schools», which consists of using each qualified teacher as a supervisor responsible for about 200 pupils, and at the same time introducing modern teaching techniques, tends to replace the situational classroom of the formal education system. The approach brings, of course, an interesting solution to some complex problems in the field of education and could probably be applied to certain levels of education in the developed countries. However, it seems to encounter many constraints in the developing countries, especially those of South East Asia.

In some countries in this area of the world, a very small percentage of the population has the opportunity to get an adequate education. Governments try their best to find a way to educate all their school age children. Besides the concern with literacy, they also worry about the adaptation of school education to fit social demands and daily life problems. Furthermore, among the pupils who can attend primary school, a little more than 10 percent go to high school and almost 90 percent leave primary school and go back to live in their communities. The question now is how to fulfil both purposes of enabling the pupils who want to pursue further education and equipping those who drop out of school with basic professional and technical skills adaptable to their environment and daily lives.

From this standpoint, it would be wise to have a compromise between the concepts of the formal education system, and those of the «no more schools» approach.

With the techniques and innovations borrowed from the latter approach to the delivery of mass primary education, the optimum use of resources within the local community would not replace but effectively supplement the formal education system.

It is worth mentioning some community resources related to education, namely :

— **Human resources** : existing school teachers, private school teachers, Buddhist monks, other religious bodies, military personnel, students, educated villagers ;

— **Cultural resources** : radio, television, seminars, conferences, talks, libraries, newsletters, newspapers ;

— **Facilities resources** : public and private schools, pagodas, churches, mosques, military camps, meeting centers in the villages ;

— **Social and industrial resources** : factories, enterprises, workshops, associations ;

— **Financial resources** : diverse gifts and budgets.

Before tackling the effective use of community resources in providing low cost primary education, one should recall some practical points of view brought out by some of the distinguished speakers during the last INNOTECH seminar about the delivery of mass primary education. These points of view include :

— The rational use of existing school teachers and school facilities (speaker from Thailand) ;

— The community school or community education concept and the meeting of social demand at the primary school level (speakers from Vietnam and Khmer) ;

— The creation of non-formal centres around the formal schools to receive all the remaining school age children (speaker from Indonesia) ;

— the effort towards the development of adequate curricula (speaker from the Philippines) ;

— the use of radio and television to upgrade school teachers and to teach pupils (speakers from Latin America and Ethiopia).

Without talking about special schools for the handicapped or for mentally retarded children in these Asian countries, the development of schools, although they belong to the educational system, is due to a great extent to community participation.

In view of the present world education crisis, and taking into account the above points of view, the most positive trend seems to be that education should go back to a « relinking » with the community.

Here are some suggested schemes to be considered as realistic in the use of community resources for providing low cost primary education.

1. Rational use of existing school teachers and school facilities.

On this point, it would be wise to join of Dr. Kaw Swasdipanich, the speaker from Thailand during the last seminar, concerning physical facilities and good management practices.

Moreover, many modern educators advocate that education depends more on teaching techniques than the length of time teaching takes. Some experiences have proved that teaching two shifting classes can result in the same level of knowledge as full-time classes.

By the way, the two shifting classes can be considered as one solution in the matter of providing low cost primary education. On the one hand, every school would be able to receive, if needed, twice the number of pupils with its existing facilities. Each teacher could teach two classes, one in the morning and one in the afternoon, or in other words, we can reduce the number of teachers by half while still maintaining the same number of pupils.

On the other hand, besides this general academic knowledge, the pupils who attend school in the morning should go to school in the afternoon and vice versa, to get practical training such as in physical education, youth training, art, home economics, agriculture, animal husbandry, handicrafts, woodwork, simple mechanics, and community activities, with specialized teachers. The proposal follows the principle of half study and half work.

It involves, of course, some additional expenses for supplementary pay to the teachers who teach the two shifting classes, for remuneration to the specialized teachers, and for the purchase of equipment and facilities for practical activities. However, it may be the best solution to the problem of schooling and the problem of educational qualification, especially that of adapting school education to daily life activities.

2. Parents' association for educational development.

It is quite common in these Asian countries for the community to contribute to the school in terms of human, financial, and material resources. The parents' association provides men to help teachers as assistants and resource persons, and donates money to build school plants and to buy school materials.

It is now time to get more involvement of parents' associations in sharing responsibilities in the education of their children as a whole. Parents'

associations based on democratic principles and good-will should not only provide materials and school facilities, but also contribute to the orientation of the school curriculum toward the real needs of their daily life. In this way, school ceases to be a centre separated from the community.

On the contrary, it becomes a centre where children can obtain basic knowledge and a centre which participates in the improvement of the community and vice versa.

3. Use of Buddhist monks or other religious sects and educated villagers.

In Asian countries, Buddhist temples or other religious organizations have much influence in the preservation of national culture and in the field of mass education.

In the Buddhist countries, parents used to send their children to the pagoda and call them back home during the working season. The pagoda provided professional training and basic literacy to the villagers, adults and children.

The Buddhist monks fulfilled this duty without any remuneration. Nowadays, they continue to do so. Unfortunately, the Department of Education, without much conviction, tries to use these community resources only a little, after a very careless training in lay teaching techniques.

Besides, there is a trend to use non-qualified teachers (former high school students or educated villagers) selected from the village, to teach the lowest classes of primary school in remote area villages, by paying a salary equivalent to $\frac{1}{3}$ of that of an ordinary teacher. Up to now, this has been focused uniquely on the quantitative problem, quality being neglected.

As the complement to the above suggested rational use of existing school teachers and school facilities, low cost primary education again can be provided through the maximum use of these two available community resources. To reach the objective, adequate training of the monk teachers and non-qualified teachers in teaching techniques and the use of innovation and technology is necessary.

This approach does not need any comfortable facilities. The school can be considered as non-formal, and may be organized under light shelters, in the village meeting centre, or in the facilities available in the pagoda.

4. Private schools and their teachers.

Private schools also play an important role in mass primary education. Unfortunately very little attention is paid to these schools. Their development is focused much more on the lucrative aspect than the educational aspect. The teachers are selected among educated people, but they begin teaching without professional training.

There is presently a scheme trying to help these schools to have a better curriculum, to work co-operatively with other educational institutions, and to organize in-service training for their teachers.

5. The military during peace-time.

Educated military during peace-time can be mobilized as an important force in mass primary education.

Finally, as a conclusion, the success of the above schemes supposes an adequate curriculum, good management practices, sufficient indispensable teaching materials, and an appropriate system of upgrading and training. Radio, television, and newsletters seem to be very important tools in this matter.

All this depends mainly on a good understanding between the body of technicians, top politicians, local administrators, parents, and the training centre.

MALAYSIA'S EXPERIENCE AND SOME SUGGESTIONS IN THE USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION.

by Mr. RASHID B. Md. NOR and
Mr. HARITH B. MUHAMMAD LIKI
MALAYSIA

1. Formal education is one of the effective means of developing human resources. Although of late the trend is to start it in the kindergarten, it actually begins in the primary school which provides primary or first-level education. It is of the utmost importance that a child should receive at least a primary education as it is an essential rudiment in preparing him to be more functional in his country's economic development, to have more meaningful participation as an adult in political processes and to lead a fuller and richer life. The Asian Model which sets the target dates for achieving first-level education of seven years for countries in the Asian Region is a concrete proof that in this region providing primary education is still a difficult problem to solve. This seminar is being held to find some practical suggestions to overcome that obstacle.
2. Providing education to the child is always a real expense which may be borne by the government and the community. In this discussion a community is strictly limited on the basis of locality. It may mean a village or a cluster of adjacent villages or it may imply a town. By community, resources we mean all the human resources available in the community, the knowledge, skills and capacities of its people, lands and buildings and other assets owned either jointly by the community or by an individual and money or other liquid capital raised by the community. In this paper we first describe how community resources were being used to spread primary education in our country during our pre-independent period and how to tap these resources at present to supplement the government expenditure. In the last part of the paper we put forward some suggestions to make maximum use of the community resources in order to reduce costs incurred by the government in providing primary education.

3. Koran Schools (Islamic Religious Schools).

The early beginnings of education for the Malays, the majority race in the multi-racial society of Malaysia, were in most parts of the country, through the Koran School. These were set up by the community to enable children to read the Koran and to read and write Malay using the Arabic or Jawi script. The Koran Schools were either housed in buildings built and maintained by the community or in the house of the instructors who were being paid partly from collections contributed by the parents and partly from the religious fund collected by the community. The running of the schools was mostly left to the instructors. Later the Koran Schools were given financial assistance by the government on condition that they taught the three R's from books in Malay. In the course of time these Koran Schools became purely secular schools and later on developed into government Malay schools as they are today.

4. Native Voluntary or People's Schools (Sekolah Rakyat).

To meet the need for education facilities in places where the Government was unable to provide schools, especially in remote villages, a number of villages formed Local Village Committees which built and supported schools called Native Voluntary or People's Schools. They provided primary education to the children in the villages. Later some of these schools received financial aid for teachers' salaries, buildings, equipment and other requirements to supplement the effort of the Local Village Committees.

5. Chinese Community Schools.

- (a) The traditional veneration of the Chinese, another major minority race living in Malaysia, led from a very early period to the establishment of Chinese language schools. These were wholly owned and maintained by the local Chinese Communities through generous donations by individuals, village and district societies, associations of people and members of the school committees of management who also voluntarily undertook to collect funds for the upkeep of the schools.
- (b) Classical literary works were used in the teaching of Chinese languages, while the correct use of the abacus was very essential in teaching mathematics in these schools. After the 1911 revolution in China, Chinese in the country were alive to the need for a more modern system of schools providing education to their children. Schools on the model of the new schools established in China were subsequently established in Malaysia.

- (c) Later small per capita grants were paid to some of these primary Chinese schools by the government. The amount of the grant varied in accordance with the grade in which a school was placed after inspection and examination. In 1952, a new "salary contribution" scheme of grant-in-aid was brought in to replace the per capita grants for Chinese primary schools. Many of these schools accepted the assistance as it gave regular salary scales for the Chinese teachers and the security of tenure which they formerly lacked. In return the school undertook to teach English and Malay to all pupils, to follow a curriculum approved by the Department of Education and to charge only the approved fees.

6. Indian Schools.

The real history of Indian vernacular schools in Malaysia began with the development of coffee, sugar, coconut and finally the rubber plantations. From the 1870's onwards, small schools were built and maintained by the Indian communities wherever Indian estate population created a need. Some of the estate owners contributed towards the maintenance of the schools. The introduction of the Labour Code in 1912 enforced in certain areas of the country by which an estate with ten children of school going age (defined as between 7 and 14 years) was required to provide and staff a school stimulated further the growth of these schools. At the same time a small per capita annual grant was given by the government to supplement the contributions of the communities and the estate owners. The amount of the grant given was based on examinations and average attendance of the schools.

7. English Education

- (a) In the early nineteenth century, education in certain parts of the country which formed part of the British colony was not considered to be the direct concern of the government. It was left to the enterprise of the public spirited individuals and charitable bodies who were responsible for establishing and maintaining English schools known as "trust schools". Under the stern pressure of financial difficulties caused by mounting costs these trust schools were forced by circumstances to become government institutions by the 1920's but they all retain local interest and support and are justifiably proud of their traditions.
- (b) The second type of English school was the Christian Mission school. The earliest of these were those established by the Catholics in the middle of the nineteenth century. The largest number of these

schools for boys are under the direction of the Christian Brothers and the American Methodist Church. The part played by Christian Missions in the English education of girls has been greater than that of boys. English schools for girls are mainly those run by the Catholic Convents of the Dames de St. Maur and the American Methodist Church. At the beginning these schools were wholly built and maintained by Christian Missionaries from funds made available to them through the Church and through fees collected from the pupils. The local Christian communities and well-wishers also support the schools.

(c) At the beginning the government assisted the trust and mission schools by giving per capita grants, varying in amount according to the schools' annual attendance and examination results. Later the grants given to the schools was equal to the difference between revenues collected by the schools and their "approved expenditure".

8. In the above narration we have described briefly how community resources in the country were being utilised before independence to supplement the Government primary schools whose medium of instruction was either English or Malay. With the enforcement of the Education ordinance of 1957, the year Malaysia became independent, the People's Chinese and Indian Schools were taken over gradually by the government in accordance with the wishes of the board or committees of management of these schools. Some of the Chinese schools opted to be independent and thus would not receive any aid from the government.

9. Board of Managers/Schools and Educational Institution Boards.

The Government, realising the important role of the Village Committees and Committees or Board of Management of the various types of schools described above in making use of the community resources in providing education in the country has gazetted rules and regulations for a Board of Management to be established in every aided and government school. Beside managing the school in accordance with the Act and the Rules and the Regulations of its establishment, the Board is encouraged to raise funds from the local community to supplement government grants. With the implementation of the Aziz Salary Scheme for teachers most of the teachers who were nongovernment servants before opted to be government servants. The duties of the Board of Management of appointing and terminating the service of teachers and of administering government funds were taken over by the government. Rules are now being formulated to replace the Board of Management to School or Educational Institution

Board whose function shall be confined to the welfare and development of the school or educational institution as the case may be and to the administration of funds raised by it for such welfare and development.

10. Parent-Teachers' Association.

Parent-Teacher Associations have been established in a number of schools to enable parents to participate more meaningfully in the education of their children. They also assist and complement the efforts of the school in meeting the material requirements and needs of the pupils in their activities. The government, being aware of the importance of parents' participation in the welfare of the school, gazetted "Parent-Teacher Rules, 1972" to make the establishment of such association compulsory in every school.

11. Old Boys' Association.

Some of the well-established schools have already formed their own Old Boys' Associations while others are being encouraged by the government to form their own. Some of the old boys who are now prominent citizens and well-off provide leadership and initiative in gathering community resources for the benefit of the schools.

12. Some suggestions for reducing cost in providing primary education.

- (a) Thought should be given to building schools near or adjacent to public open spaces and public or children playgrounds. By so doing these open spaces and playgrounds could be fully utilized by school children as well as by other members of the community. This will definitely save money in providing and maintaining school fields and playgrounds.
- (b) In remote villages where the number of children of primary schooling age is very small the concept of the Koran School could be used. A qualified teacher could be sent to live and teach in the village and also to supervise the part time instructors. The Malaysian government does build small primary schools in these villages but finds it uneconomic to run the schools. The government is now studying some other alternative arrangement to provide education to the children of these villages.

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PROGRAMMED TEACHING AND THE USE OF LOCAL HUMAN RESOURCES IN EDUCATION

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Community resources are human as well as physical. The cost of education can be reduced when schools are built with locally donated funds and labor, when members of local communities provide furniture and other physical equipment, but the total reduction in cost that can be achieved by these means is limited. The major expenditures in education are made for human, not physical resources. Everywhere teachers' salaries represent 70% to 80% of education budgets. The primary aim of this paper is to examine the possibility of using locally available human resources to reduce the cost of teaching.

It is generally assumed (1) that teaching can be done at all only by people with special « professional » qualifications and (2) that the higher the qualifications of the teacher, the better the teaching. It follows from these two assumptions that to educate children the teaching must be done by professionally qualified teachers and that the quality of education provided by an educational system will be directly related to the level of education and training of the teachers. And, since the salaries of teachers are closely related to their qualifications, it also follows that the basic cost of education will be high and that education of high quality can only be obtained by further increasing that cost.

One purpose of this paper is to show that both of these assumptions are wrong. There is evidence to show that with the aid of a recently developed technology called « Programmed Teaching, » people with relatively little education and no professional training can be trained very quickly to teach and teach well.

It has been shown in a number of experiments that non-professionals serving as programmed teachers can teach as well and in some cases better than the average professional. To the extent that people with the quite limited qualifications necessary for programmed teaching are available in local communities they constitute a local human resource which can be used not only to reduce the cost, but to increase the quality of education.

The Pontian Experiment

One very relevant bit of evidence comes from an experiment recently carried

out by Innotech* in a number of rural communities near Pontian in the state of Johore, Malaysia. In this experiment, first grade children were taught the reading of Bahasa Malaysia by members of the community who had received their entire education in the local elementary schools. These experimental teachers were given a total of 16 hours of training in programmed teaching. Children taught by these «unqualified» teachers learned more than children in a matched control group who were taught by their regular (professional) teachers.

The experiment was carried out in 10 Malay stream schools, two within the town of Pontian, the remaining eight in kampongs within a radius of 12 miles. The five experimental teachers and their immediate supervisor were all local residents, unemployed adults who had completed only the sixth grade in the local schools. The six persons chosen were selected on the basis of interviews with 17 candidates recommended by the principals of the participating schools.

The experimental teachers were given a total of 16 hours of formal training in programmed teaching procedures; this training was supplemented by on-the-job training provided during visits of the supervisor approximately twice weekly.

The teacher responsible for the instruction of the control group children were the regular teachers in charge of the 10 classrooms that were selected for the experiment.

The teaching program followed by the experimental teachers was devised by Innotech personnel. The content of the program and the specified teaching techniques were designed as far as possible to be consistent with the syllabus and with traditional practices in the teaching of beginning reading in Malaysian schools, but the presentation was modified to incorporate recent research-based innovations in the teaching of reading. Major emphasis was placed on the sounding-out of words and the understanding of words and sentences. Both the content and the technology were specified in detail in a 65-page teacher's guide (written in Bahasa Malaysia) which the experimental teachers were trained to follow exactly.

The children who took part in the experiment were selected as far as possible from the lower half of their classes; they were assigned to matched experimental and control groups on the basis of pretest scores and their teachers' estimates of their future reading performance. Both groups were taught reading of Bahasa Malaysia one and one-half hours daily. Experimental group children were taught for one hour by the classroom teacher and one-half hour by the experimental teacher. The expe-

* In the references at the end of this paper the Pontian experiment is indicated by the letter I; the remaining eleven experiments are numbered as they are in the text.

perimental teaching continued for 55 school days, beginning in February, a month after the school year opened, and ending early in May. At the end of this period a reading achievement test was given as a post-test. The test was designed to measure the children's ability to read words taught in the program, in the classroom textbook, in both and in neither, and to understand the meanings of both words and sentences.

The results (Table 1) clearly favor the experimental group. Twelve measures of reading performance were obtained by scoring various sub-divisions of the test. On every measure the experimental group scored higher than the control group, and in 8 of the 12 the difference between the means for the two groups were statistically significant. On one important measure, sentence comprehension, scores were more than 30 % higher for the group taught by the programmed teachers.

The results of this experiment clearly contradict the two assumptions mentioned earlier. They demonstrate that it is possible for persons who are not highly educated and who have no professional training to teach and to teach well enough to actually improve the quality of education. And these results further demonstrate that the human resources necessary for this accomplishment are available in quite small Asian communities. Implications for the cost of primary education are self-evident.

But this experiment, standing alone, should not be over-interpreted. It is little more than a demonstration of feasibility. While it shows that a particular program was effective and that locally available talent could carry out that program successfully, it does not follow that all of the instructional objectives of a primary educational system can be satisfied by such means. It has shown only that effectiveness of the first three months of instruction in a single subject matter area can be improved when locally available people are used as programmed teachers (see table below).

Eleven Other Experiments

Fortunately, there are a number of other experiments, similar in important ways to the Pontian experiment, which indicate that the implications of the Pontian experiment may be generalized to other instructional levels and other subject matter. Eleven such experiments are briefly described below, arranged roughly in order of instructional level.

1. In this experiment, approximately 100 retarded children were taught reading vocabulary in a classroom situation by means of the Progressive Choice Me-

TABLE 1
Pontian Experiment : Detailed Post-test Data
Comparisons of Total Test and Sub-test Means for Experimental and Control Groups

Measure	Possible Score	Chance Score	Exper. Group Mean	Control Group Mean	Diff.	oD	t	p
Total Score	80	10	41.6	36.6	5.0	2.31	2.18	.05
Group Test	40	10	24.7	21.4	3.3	1.14	2.88	.01
Individual Test	40	—	16.7	15.0	1.7	1.29	1.31	N.S.
Word Items	64	6	32.7	28.8	3.9	1.90	2.06	.05
Program Words	16	1.5	8.6	6.8	1.8	0.51	3.51	.001
Text Words	16	1.5	9.2	8.9	0.3	0.54	0.50	N.S.
Both	16	1.5	9.2	7.9	1.3	0.53	2.44	.05
Neither	16	1.5	5.8	5.5	0.3	0.50	0.58	N.S.
Sentence Items	16	4	8.7	7.3	1.3	0.52	2.57	.05
Comprehension	20	5	12.1	10.8	1.3	0.65	2.05	.05
Word Comp.	12	3	7.7	7.1	0.6	0.45	1.41	N.S.
Sentence Comp.	8	2	4.4	3.8	0.7	0.26	2.60	.05

thod, a carefully engineered procedure designed to control «response conditions, sequence of letter presentation and the relation of letter sounds to letter shapes.» After a year of instruction, the mean reading vocabulary score for the experimental group was 12.3 For a similar control group taught by the conventional basal reader method the mean score was 6.5.

2. A second experiment, also designed to evaluate a new method for teaching reading vocabulary to retarded children, compared two automated procedures with conventional classroom teaching. One of the automated procedures involved the use of an electric typewriter keyboard, a simplified form of O. K. Moore's «responsive environment.» The other was a more typical multiple-choice type teaching machine Mean vocabulary gains at the end of eight weeks of instruction, half an hour daily, were 2.3 for those taught by the conventional method, 21.4 for the multiple-choice group and 30.1 for the typewriter keyboard group. Gains for the

groups taught by the new procedures were 9 and 13 times those for the conventional method.

3. A third experiment was carried out at the pre-school level with disadvantaged children. Two innovative programs, a « Direct Verbal Method » and a « Ameliorative Program » were compared with a traditional teaching program. The Direct Verbal Method utilized « intensive oral drills in verbal and logical patterns » with a focus on « minimal essentials of language competence ». The aim of the Ameliorative Method was to stimulate « verbalization in conjunction with manipulation of concrete materials, » using games as a basic tool. The aim of the traditional program was « to promote the personal, social, motor and general language level of the children. » At the end of two years, gains in IQ for the groups taught by the new methods were several times larger for the new methods than for the traditional procedure. Gains were 18 points for the Direct Verbal Method, 12 for the Ameliorative Program and 6 for the Traditional.

4. The purpose of this experiment was to evaluate effectiveness of a highly structured procedure for tutoring reading in the first grade. In a control group taught by conventional procedures 10 % of the children were classified as non-readers at the end of the first grade year. In the experimental group which was given 15 minutes of the tutoring program daily as a supplement to their regular classroom instruction the proportion of non-readers was reduced to less than 1 %.

5. In an evaluation of a similar tutoring program in mathematics, year-end test scores for a kindergarten group given 15 minutes of programmed tutoring were equal to those achieved by a first-grade group taught by conventional classroom methods. At the beginning of the year pre-test scores had been significantly higher for the first graders.

6. Five third and fourth grade children were taught by the Michigan Successive Discrimination Language Program one hour daily for 12 weeks. On a standardized test, the smallest gain in grade level was 13 months, which is more than 4 times the gain of the normative control group, that is, 3 months gain in 3 months of conventional instruction.

7. In this experiment 9th grade algebra was taught in the eighth grade using programmed learning materials in the classroom. The one year course was completed in one semester and only one student performed unsatisfactorily on a standardized examination.

8. In this experiment a new first aid course was developed and compared with one that had been in use for several years. Post-test scores were more than doubled, from 132 to 278. The lowest score obtained by a student in the new course was 251; the highest score achieved by a student in the original course was 244. At the same time the duration of the course was reduced by 25%, from 10 hours to 7 1/2.

9. After revision of a military technical training course, the proportion of students achieving passing scores on criterion-based tests in First Aid was increased from 5% to 47%; in Land Navigation, the proportion passing increased from 7% to 41%, in Weapons Maintenance the proportion passing increased from 18% to 38%, and smaller gains were achieved in 4 other areas.

10. In a military training program in Electronics Equipment Maintenance, a revised course was designed which reduced training time by more than 50%, from 25 weeks to 11, with no significant reduction in terminal performance test scores.

11. The last experiment to be mentioned is undoubtedly familiar. The Open University of Great Britain offers degrees in six Faculties, Science, Humanities, Social Science, Mathematics, Educational Studies and Technology. Roughly 80% of the instruction is carried out by means of self-instructional texts; approximately 10% uses electronic technology computers, radio and TV; the remainder is carried out in person by professional teachers. According to judgments of internal and external evaluators, the quality of the graduates is not different from that produced by more traditional universities, but costs have been reduced to 1/5 of those at other British universities.

These eleven experiments--and there are others--resemble the Pontian experiment in several ways. All of them provide a comparison of two methods of teaching, one of which is an experimental teaching procedure carried out or designed so that it could be carried out by persons with no professional training in teaching. In every case the new method was clearly superior in some important respect to a conventional teaching procedure. Test scores or performance measures were markedly increased or the time or cost required for the pupils to achieve the same or a higher performance level was greatly reduced. They confirm the Pontian results in demonstrating that good teaching can be achieved and that even professional teaching can be improved upon by the use of relatively untrained people as teachers, people who are available in almost any community as a local human resource.

These experiments go beyond the Pontian experiment in showing that such results are not limited to a particular instructional level or subject matter. The

levels represented range from pre-school to University level. Subject matter range from beginning language arts and mathematics, through manual skills and technical training, to all of the topics included in undergraduate science, humanities and other university curricula. Somewhat more surprising is the fact that the results were not dependent upon a particular teaching method. The variety of techniques represented, including self-instruction, one-to-one instruction, classroom instruction, programmed texts, individualized drills, simulations, teaching machines, teaching games, visual aids, etc., is actually greater in the experimental procedures than in the conventional control procedures with which they are compared. Now is the common factor the qualifications of the teachers. Although, as already suggested, the experimental teaching in all of these experiments could have been done by non-professionals, the actual qualifications of the participating teachers ranged from elementary school graduation to professional certification supplemented by special research training and experience.

The Critical Factor.

The common feature is not instructional level, subject matter, teaching method or teacher qualifications. What is the critical factor in the success of these new techniques? The answer is that two functions, the planning of teaching and the execution of teaching, which in conventional teaching are performed by the same person, are radically separated. The planning of the teaching program is done by one person or group, the actual teaching operations are carried out by others whose primary task is to teach with the materials and according to the operation specified in the program. The result is appropriately called "programmed teaching." As we have seen, one result of the separation of the planning and execution of teaching can be an improvement in the quality of instruction. Another result, more important in reducing costs, is a lowering of the qualification required of the teachers.

One who teaches according to a program planned by others needs far less training than the professional teacher who is expected to plan as well as to teach.

The separation of the planning and execution functions in programmed teaching may be compared with the separation of the functions of composers and performers which occurred in the field of music several hundred years ago in Europe and a thousand years ago in Asia. When all performers were also composers, good music was a rare commodity, and expensive. When composing was reserved for those who have the necessary very special qualifications and performers were not required to compose, it became possible for many more people to perform. Simultaneously the quality of music improved and it became more generally available.

In music, good composers are rare, potential performers are many. The same is true in education.

Forms of Programmed Teaching

Programmed teaching can take many forms, many of which are represented in the twelve experiments that were summarized earlier in the paper. To teach the range of subject matter and levels now included in the conventional primary curriculum would require many different forms. To expand the objectives of primary education to include "life skills," as has been suggested in a number of Innotech and other SEAMEO seminars, would require still others, including some which have not yet been thought of.

Two general types of programmed teaching can be distinguished, although they may in fact be the two ends of a continuum. One type makes use of persons with special skills or subject matter knowledge but with no ability to teach. All of the experiments listed except No. 7 and No. 11 represent examples of this type. There are farmers, fisherman, craftsmen, cooks, mechanics, bookkeepers and lawyers in many communities who are experts in their special fields but can not teach or believe they can not teach what they know. Many who read well can not teach reading. Programs of this type use such people as sources of information and enable them to teach what they know. It has been said that it is easier to program a farmer to teach than it is to train a city-born teacher to farm well enough to teach farming.

The second type is designed for people who lack both teaching skills and special knowledge of a subject matter to be taught. For programmed teaching of this form the subject matter is incorporated in teaching materials, not in the teacher. The materials may be text-books, work-books, flash-cards, laboratory or shop equipment, lectures, demonstrations or documentaries on film or tape or broadcast on TV or radio, or the material may be provided by the world itself as it is found in the schoolyard or on field trips. The task of the teachers in this form of programmed teaching is not to teach at all in the traditional sense of serving as the source of information. Their sole task is to control the interaction of the pupils with teaching material in such a way that learning occurs efficiently. The Open University provides examples of this type. Here, the programmed teachers are not professors or even professors-in-training. They are little more than clerks who follow strict rules for distributing TV and radio program schedules, self-instructional teaching materials and examinations, score and return examinations to the students and keep records. They are better described as programmed managers of instruction rather than as teachers.

At other instructional levels, this type of programmed teaching may use teaching games in which the pupils learn by interacting with teaching materials according to the rules of the game. The materials and rules in combination are equivalent to a group-self-instructional program. The teacher simply presents and enforces the rules of the game. The children teach each other. One such game was included in the program used in the Pontian experiment.

A distinction that is especially important for primary level instruction is the degree to which programs are self-instructional. Most self-instructional material requires the pupils to read with considerable skill in order to comprehend the instructions, if not the content. Pupils at the beginning primary level do not have the necessary reading ability. They also lack the discipline and persistence necessary to learn any complex skill that can not be put to use immediately or before they have learned it well. In consequence, programmed self-instruction (programmed learning) is not likely to play a large part in programmed teaching at beginning levels.

Some Practical Considerations

Assuming that programmed teaching can reduce the cost of primary education, or increase its quality or both, the question arises, what are the practical consequences? What are the implications for the design and administration of an educational delivery system in which planning and performing of teaching operations are sharply distinguished?

First, it should be recognized that separation of the two functions is not a minor change. It not only involves modifications in the role and training of teachers, it would significantly add to the demands upon administrators, it would alter the distribution of operating funds and personnel and it would almost certainly affect instructional objectives in ways that may go beyond the technical clarification that is necessary for the design of effective teaching programs. The total effect of wide-spread adoption of programmed teaching might well be an educational revolution.

The programmed teacher might be classed as a sub-professional, something less than the present professional teacher, but not necessarily. The modern concert performer of music composed by others is no less a professional than the early minstrels who composed their own tunes. However, in an educational system that includes both programmed and conventional teaching those who are now professional teachers would presumably be upgraded in both skills and status. The role of the professional would continue not only the traditional function of artistic teaching--in areas and levels which it is difficult to program--it would include an entirely new managerial function-- the supervision and possibly training of program-

med teacher. To carry the managerial role it would be necessary for the professional to know the specialized jobs, i. e., the programs and functions of the programmed teachers and the underlying technology in considerable detail. The new professional teacher would come to resemble more closely professionals in other fields, all of whom delegate some of their more routine tasks to sub-professionals or paraprofessionals.

The philosophy, curriculum and functions of teacher-training institutions would also be modified. It would no longer be assumed that all teachers are to be trained to function as autonomous creative artists. Those who qualified for *this* extremely difficult role would also need to be trained in management skills and the nature and practice of educational technology. Others, the programmed teachers would be trained to serve in the more limited role of paraprofessional. (This latter training might or might not be assigned to teacher training colleges.) And since the staff of teacher-training institutions have much of the background necessary for instructional planning, design and evaluation, it seems likely that a research and development function would be added to the training institutions' traditional responsibility for training teachers.

The responsibilities of administrators would be increased. Programmed teachers require far more rigorous supervision than fully qualified professional teachers. Present systems of public education are highly dependent upon the talents and flexibility of the professional classroom teacher. Administrators supply or distribute funds, buildings and equipment, provide guidelines in the form of syllabi and teaching materials concerning what is to be taught and generally smooth the way. Given this supporting framework it is taken for granted that the professional teacher will devise a plan to teach within it. But if administrators are unable to supply any or all of this framework it is also taken for granted that the teacher will be able to devise another plan and continue teaching. It is not entirely an exaggeration to say that if the administrators fail completely the professional teacher is still expected to devise a plan, perhaps for teaching under a tree with only a stick to scratch in the sand. But programmed teachers will not be so flexible. The instructional programs which enable programmed teachers to teach well may fail completely when some part of the administrative support for which they were designed--teaching materials, scheduling, supervision, etc.--is not delivered. This requirement of effective administration at all levels could well be the Achilles heel of programmed teaching.

Administrative structures would also change, if only because of the increased magnitude and centralization of the planning function. Additional space and personnel would be required by the enlargement of the planning staff to implement the

research and development activity required for instructional program design. It would be necessary to develop new relationships with teacher training colleges and universities.

All of these changes would be reflected in budget allocations. The costs of educational production, i. e., teaching costs, would presumably go down, as, perhaps, would training costs, but allocations for teaching materials, supervision and especially research and development, would increase. The major potential reduction in production costs can be estimated by comparing the salaries of professional teachers, now and projected, with those of local non-professionals. The magnitude of the increase in research and development costs can be estimated from reports based on current experience. Program development for one hour of classroom instruction requires between 50 and 100 hours of professional time. This estimate may be conservative when one considers the time required (one year or two, 50 weeks or 100?) simply to write the books a student could read in one 30-hour week. In addition to planning and writing, effective program development requires several tryouts, several evaluations and several revisions before it is ready for use in the working classroom. Experience in the Pontian experiment and others that involve programmed teaching indicate that the additional costs for materials and equipment, a common bugaboo when educational technology is mentioned, may be small and in some cases negligible.

Three other aspects of the planning and development functions may be mentioned, namely, the availability of usable programs, knowledgeable personnel and the necessary technology of program development. Even without knowing the objectives of a proposed primary educational system it is possible to give a definitive answer concerning the availability of programs ready for use in SEAMEO countries. They are not now available. Hundreds, possibly thousands, of instructional programs have been written in the United States, Great Britain and a few other countries to teach academic subjects at the elementary level. Some are self-instructional, most are designed to be presented by teachers, but of these, most are incomplete: they are written for execution by professionals who are expected to complete them by improvisation, or they consist only of teaching materials with little or no specification of teaching procedure. Thus they are not suitable for use by non-professional programmed teachers. Most are simply written, without the empirical validation and refinement that requires repeated tryouts, revisions and objective evaluation. A few, including some of those mentioned earlier, would satisfy the criteria implicitly being applied here, but they are, of course, written in another language and for children of another culture. Some of the programs which are available, however, contain material that might be used to

eliminate a few of the preliminary steps required for the development of suitable programs.

The recruiting of staff qualified by both training and experience for the development of programs that are systematic and complete enough for use by non-professionals may be difficult. The technological approach that programmed teaching represents is definitely not in the main stream of current public educational philosophy or practice anywhere in the world. As a result, the number of people actually engaged in rigorous program development is small and graduate programs specifically designed to train such people are few. Graduate programs in obviously related fields such as curriculum development, educational psychology and educational research seldom have an appropriate emphasis and often ignore educational technology entirely. There are signs of change, however, Audio-visual departments in universities and training colleges are changing their names and emphases to « Instructional Systems and Technology ». Military and industrial training, while small in relation to the public educational enterprise, has been using noncommissioned officers as programmed teachers for many years. It is perhaps significant that these training groups recruit many, if not most of their program development staff from sources other than schools of education. Psychologists and other social scientists often have a technical background and orientation which is well adapted to educational technology and the practical work of research and development in that field.

The technology of program development itself is well advanced, although until recently there have been few attempts to apply it to core problems of public education at any level. Very little of the relevant literature will be found under the heading of « Educational Technology. » This term generally refers to little more than the physical technology of education, ETV, radio and audio-visual aids. In this paper the term is broadened to include the psycho-technology of education, which is a far more important element in the technology of instructional program development. At present, information concerning the psycho-technology of education is more likely to be found under the headings, Programmed Instruction, Systems Approach in Education, Training, and recently, Instructional Design. Important parts of this technology are reported under Task Analysis, Instructional Objectives and Criterion-referenced Instruction, Tests and Evaluation. Much of the literature is written in the context of military and technical training and a great deal of it centers on the development of self-instructional programs, but the principles are applicable to programmed teaching in primary education.

One principle mentioned in every modern discussion of educational planning and one that is especially important in instructional program design is that ins-

structional objectives must be formulated clearly and in great detail. In the process of examining statements of existing objectives they are often found to be extremely general and not at all clear, and when they are clarified it sometimes becomes apparent that they are not consistent with current policy or current practice, or both. In that case a re-examination of objectives at all levels may be in order. But such a re-examination is the subject for another paper or another meeting.

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Abstract

An experiment recently carried out by Innotech personnel in Pontian, Malaysia showed that first grade children taught reading in Bahasa Malaysia by graduates of local elementary schools trained in programmed teaching scored significantly higher in reading achievement than a matched group taught by their regular teachers. A number of other experimental evaluations of programmed teaching support the conclusion from the Pontian results that non-professionals can teach well and in some cases better than the average professional. They also indicate that the success of programmed teaching is not limited to a particular subject matter, level, teaching method or teacher qualification. In combination the results of these experiments suggest that programmed teaching has potential for reducing educational costs through the use of locally available talent.

The critical factor is the separation of the planning and performance functions in teaching. Well-designed and validated teaching plans (programs) enable

many "unqualified" people who are available in quite small communities to perform well as teachers.

Reduction in the production (teaching) costs by the use of programmed teaching will require significant changes in administrative procedures and relatively large increases in research and development expenditures.

SOME ALTERNATIVE WAYS OF UNLEASHING COMMUNITY RESOURCES FOR PROVIDING EFFECTIVE AND LOW COST PRIMARY EDUCATION

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I. Introduction.

This paper is prepared for the INNOTECH REGIONAL SEMINAR on USE of COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION, to be held in Saigon from 12 through 16 November 1973.

In its announcement regarding the Seminar, the Innotech Center has requested speakers to prepare «thinking papers» or position papers rather than simply reports of on-going developments in their own countries. The Center also expresses the hope that the papers presented be thought provoking leading to the kinds of brainstorming discussions which will make the Innotech Seminars the source of a dynamic interchange of ideas among SEAMEO member countries.

It is with these guidelines in mind that this paper has been prepared.

The writers hope that the alternatives presented constitute a small contribution in the search for ways of mobilizing resources for the sake of education. As indicated by the topic of the seminar the educational activities under discussion are confined to primary education. This is not necessarily school rather it comprises all that youngsters minimally need to learn in order to be able to live a fruitful life.

Providing effective education requires resources. And Government resources (especially money) are scarce in this region. That is why educators have to look for other resources. Any community does have resources. However they are mostly latent, unnoticed, undiscovered, unutilized. Well then, why not activate and mobilize them for the sake of education?. Why not unleash the resources, so to speak ?

Before generating alternatives for unleashing community resources, one needs to explore first what community resources are and how to identify them. This is dealt with respectively in paras II and III of this paper.

In line with the brainstorming character of the seminar, no specifications have been applied to the alternatives presented in para IV.

Some final remarks conclude the paper.

II. Community Resources.

Community resources are all kinds of sources in the community which potentially extend support to educational activities.

In the context of the Seminar the educational activities under discussion are confined to primary education.

Community resources comprise a multi-variety of sources.

They range from the traditional books, maps, pictures and other instructional materials to money, persons, the wind, the sun, plants, animals, cultural traits etc.

For matters of convenience we shall distinguish the following categories, listed according to the order of importance as we see them :

- a. person
- b. social
- c. cultural and religion
- d. environmental
- e. money
- f. material

A. Person Resource.

Person resource refers to individuals. Individuals who are able and willing to provide support to education. Maybe it is better to say who are willing and able to. After all, willingness is the decisive factor. No matter how resourceful a person is, if he is not willing to extend his support, education will not have the slightest benefit from him.

What persons in the community then are perceived potential supporters to education ?

1. **Powerful individuals.** People are powerful by virtue of status or of ownership. The local administrator, the commander of the army or the police

station are powerful because their legal status designates them to wield power. Not less powerful however are their wives ! This is a living reality in our Asian countries.

Other people having power by virtue of status are the custom leaders. With the traditional power they exert they are very prestigious individuals, especially in regions where traditional mores and values are held in high esteem like in the BATAK area (North Sumatra, Indonesia), MINANGKABAU (West Sumatra Indonesia), TORAJA (Central Sulawesi, Indonesia).

Also powerful are the religious leaders : the «guru», «kyai», priest, or « pedande ». The power these people exert is charismatic in nature.

Not less powerful are the leaders of political parties controlling the government.

The successful business man, the rich landowner, the big industrialist are examples of people who possess power by virtue of ownership.

Regardless the desirability of these power structures, they do exist in most communities and very often exert exceptional influence.

Consequently these top level power wielders are the most potential resources in the community.

They pass judgements on various public matters, such as educational activities and will support, neglect or oppose them. In passing their judgements they mostly rely on their associates : a secretary, an aide-de-camp, a deputy, These are the second-rank power holders who in complex societies are growing more and more influential.

2. Skilled individuals.

Any person with any skill is a potential resource : a tailor, a barber, a cook, a typist, a midwife, a bicycle repairer, a farmer, a bookkeeper, a musician etc. Also semi-skilled persons such as a housewife, or a secondary school drop-out are resources in embryo.

3. Knowledgeable persons.

In any community there are knowledgeable people in subject areas of primary education. The village midwife or the nurse knows a lot about

the human body, nutrition, health and sanitation. The agricultural supervisor is a resource for botanical sciences and farming experiments. A retired policeman or a judge has studied a lot on civics and history. A storekeeper can be helpful in bookkeeping exercises. A building contractor is resourceful for mathematics.

4. Amiable persons.

There are people who are neither powerful, nor skilled nor knowledgeable, but willing to help. They have a favourable attitude to education, they are amiable, who once mobilized are willing to extend the support requested.

B. Social Resources

With social resources we refer to informal and formal groups. They include persons, however not as individuals but rather as a «Gemeinschaft». Certain norms and values prevail in those groups. These norms and values can be a motivating factor to provide support to education. Some formal groups like professional organizations, civic organizations, social organizations and the like have statutes or regulations which prescribe or facilitate such support.

C. Cultural and Religion.

Any given culture has traits which in itself are a resource. In Indonesia for instance the «gotong royong» spirit (mutual assistance) is still very much in evidence. When employed in education this spirit makes one of the greatest resources.

Popular plays like «wayang» (puppetplay), «lenong» (folkplay), «reog» (folk comedies) etc., are a source for building attitudes and also knowledge.

An other potential resulting from culture is knowledge itself. With the knowledge explosion of the present century the school has ample opportunities to devise alternatives in providing learning opportunities necessary for a fruitful life.

Religious teachings saying that conducting educational undertakings is one of the most praised virtues is another resource.

D. Environmental.

This category comprises the physical environment of the school. They are:

- natural : the wind, the sun, the sea, the river etc.
- man-made : railway station, museum, library, paddy-field, factory etc.
- non-human beings : animals, cattle.

E. Money.

It is evident how important money is. The traditional money resource for the school is the Government's budget, routine as well as development budget. But this resource is limited especially in our Asian countries. Very often official budgets cannot even cope with the primary routine expenses. It is therefore imperative to look for other money resources.

Money is owned by rich community members. Factories, estates, cooperatives are also potential money-resources. In less prosperous communities one cannot collect money for the school. But empty bottles, old news papers, old clothes etc. collected by the pupils can be sold and thus make a money resource. Also handicrafts produced by the pupils and sold publicly is a money resource.

F. Material

This category comprises a.o. : the public radio and t.v.- set, films, newspapers, magazines, posters, pictures, equipment etc. provided by various Governmental agencies, such as the Ministry of Information, of Health, of Religion, of Internal Affairs, of Agriculture etc. for their extension services and by private organizations.

Other material resources are to be found in the homes of community members : kitchen and other home-making utensils, books, radio t.v, gardening equipment etc. In offices : (public as well as private) typewriters and calculating machines.

III. Identifying community resources.

In para II community resources in general have passed the revue. Now the problem is how to identify them for a particular educational center (school). Two techniques have been suggested.

- a. surveys
- b. observation

Conducting a survey is supposed to be the best thing to do. However in a village there are few, if any, who are able to design the instrument. It is therefore deemed necessary that a competent agency is assigned to do the job. This instrument should be valid and feasible. It is valid when it really identifies resources available. It is feasible when it is easy to understand, not complex, not expensive. Such instruments then should be made available to any one who wants to do the survey.

Most likely a member of the teaching staff would conduct the survey. However, it can also be done by any member of the school supporting committee— if there is any, or anyone interested in education.

In case it is not possible to conduct a survey, identifying resources can be done through observations to be carried out by a member of the teaching staff or any member of the community who is interested.

Observations should be done over a sufficient period of time, approximately during one month.

V. Some alternatives of unleashing community resources.

In generating alternatives to the mobilization of community resources, we should first question what problems we want to solve by utilizing them. It seems that the main problems our primary education encounters are :

1. Too large non-school going gap.

Approximately 40% of the school-age group are not in school for various reasons.

2. Inadequately trained teachers and educators.
3. Irrelevance of education.

The education offered is not what is actually needed for the development of the individual, the society and the country.

4. Inadequate teaching materials.

Keeping in mind the prevailing problems and the resources available the following alternatives have been generated :

A. ALTERNATIVES CLUSTER A. (to solve problem no 1 : too large non — school going gap).

Many factors have brought about the problem, such as : general poverty of parents, apathy and low value attached to education, limited school facilities and staffing, and others.

1. Use of person resource.

This resource is deemed to be the most forceful and the most promising. In the first place should be mentioned the *local administrator* (village head). By every means possible educators should seek to get his support

for their educational undertakings. In case it is hard to come in contact with the administrator himself, why not approach him through his wife? Certainly she can talk about the matter with her husband during tea or breakfast or any other opportunity when the atmosphere at home is favourable. An other channel of communication which leads to the administrator his secretary or whatever associate he usually relies on.

Once the administrator is interested in education, the gate to social support is opened. Committees can be established presided over by the administrator or at least initiated or sponsored by him. Depending on the need of the school, such a committee can do the following jobs :

a. Fund raising

Organize performances, fancy fairs and other events popular in the community. Financial gains are to be donated to the school for building an additional locality or for paying the salary of additional teachers. Funds are also to be utilized to help needy children go to school or to follow an educational program. a.o. by providing with clothes, meals or learning materials such as a writing block, a pencil etc.

Wealthy members of the community are surely willing to donate in the fund raising program when it is the administrator who persuades them.

b Recruitment of volunteers, who are willing to.

— Make their homes available for learning activities so that these homes become Learning Centers

— Spend some time each week to help teach in school or in a community outreach program.

— «Adopt» one or two of the needy children by assuming the responsibility for the cost of their education.

Not only through committees can the administrator be beneficial for education but powerful as he is he can issue regulations, that :

— Everybody who wants to hold a party (wedding, initiation, etc) has to pay a certain amount of educational donation.

— For every transaction a certain amount of educational donation is prerequisite.

— Tickets for football matches and other recreational events are to be weighted by an educational donation.

— A certain percentage of the development budget of the village is to be devoted to education.

These are regulations to get funds, which partly can solve the problem of the non school going gap.

To overcome the apathy of people towards education (especially in rural areas), the administrator can issue regulations, that :

— One who wants to marry, must be able to read and sign his own marriage certificate.

— One who wants to get a loan from the local bank must be able to read and sign the transaction himself.

— One who is illiterate has to pay less tax etc.

In many communities there are several other powerholders other than the administrator such as the commander of the army or police unit stationed in the village. Being in more or less the same position as the administrator, these powerholders can play a similar role.

Skilled and knowledgeable individuals can be mobilized to teach in school. Or, individual pupils can go to them to get instruction from them in their homes or at the place they work.

Custom and religion leaders may be able to provide the use of culture and religion resources.

2. Use of social resource.

Identify formal organizations existing in the community and having potential as a resource :

— Parent-Teacher Organization can render « scholarships » to needy children. Likewise can a trade or industrial organization, a labour organization or fraternal organization.

— A women's organization running educational programs or a primary school can accommodate needy children gratis.

— A professional organization can arrange classes held by its members on a rotating basis.

— A social organization can provide breakfast or lunch, clothes and other facilities for needy children.

— Exclusive clubs, upper class social organizations and strong trade and industrial organizations can render funds needed by the school.

— Premises owned by any organization can be utilized to accommodate one or more classes.

3. Use of cultural and religion resource.

The "gotong royong" spirit (mutual assistance) prevailing in Indonesia is an example of a culture resource. According to this custom everything in the village is done collectively. Why not employ this for the school. When the school needs restoration or expansion, request some influential person to announce this and bricklayers, carpenters and other workmen will come and offer their services.

Another cultural resource is the following. It is customary in Indonesia that a housewife puts aside three spoonfuls of rice out of the rice she intends to cook. The rice thus saved makes a fair amount in a month or two and is usually spent on charitable purposes. Well, why not mobilize this put-aside rice for the school? In using culture resources the custom leader is very potential.

In Moslem communities the "zakat", "fitrah" prescribed by the Islam to be donated to the poor and to social organizations constitute a money resource for the "guru" or "kyai" (Religion leader) can extend his services. These leaders can also persuade their followers to extend their "waqaf" and "hibah" (testament) to the school.

4. Use of environment resource.

Buildings in the community like the village hall, an old storehouse or an old railway wagon can be utilized as a classroom. Also a big shady tree renders an ideal place for children to learn.

As was suggested earlier, factories and other enterprises can provide money or equipment needed. Again the local administrator is to exert his influence to persuade these people to assist the school.

5. Use of money resource.

The conventional money resource is the educational budget. It has been suggested earlier how to tap money from other resources. A wealthy

member of the community could be persuaded to invest his money in the local bank, however leaving the interest to the school.

6. Use of material resource.

As has been suggested before, use can be made of the public radio to listen to educational broadcasts. Likewise, books pictures, radios and other material possessed by wealthy community members can be utilized.

B. ALTERNATIVES CLUSTER B (to solve the problem of inadequately trained teachers).

Here again the **person resource** is the most important. We have seen how skilled and knowledgeable persons can help the teacher. They can either come to the school to hold classes, or they can give instructions at their own place. Retired officials and army men can also give a helping hand.

Of the **social resource** the professional organizations seem to offer the most potential. Cultural organizations are an other resource. From them the pupils can learn arts music.

Teachers can also make use of **environmental resources** such as the library, the museum, the farm etc to enrich their knowledge.

Material resource such as the public radio and the privately owned ones can be utilized to listen to programs especially designed for teachers.

C. ALTERNATIVES CLUSTER C (to solve the problem of irrelevance of education).

To make education relevant to the needs of society, community leaders can be requested to tell the school what to teach.

The workshops of carpenters, smiths, tailors, bakers, etc constitute a marvelous laboratory for learners to achieve life relevant skills, by serving as apprentices.

The paddy field, the farm, the lake, the wood, everything in the environment are to be utilized as open classrooms.

D. ALTERNATIVES CLUSTER D (to solve the problem of inadequate teaching material).

Several times it has been said that teaching material can be borrowed from members. Teaching material can also be made with the help of skilled workmen

out of material available. Used books, pamphlets, newspapers etc can be collected and constitute teaching material for school.

VI. Conclusion.

The alternatives presented are limited in number. Many more alternatives are possible.

All the alternatives generated need to be specified against criteria such as : feasibility, compatibility and effectiveness. It is not impossible that by using the right resource or combination of resources a whole set of problems can be solved.

Jakarta November 1973.

THE GROWING DEMAND FOR EDUCATION IN THE THIRD WORLD

by **B. ONYERISARA UKEJE**

First let me express my sincere gratitude to the organizers of this conference and all those responsible for my being here for asking me to participate in this unique experience in what is to me unique and exciting environment. This is my first visit to the Southeast Asia and I am grateful for the opportunity.

The topic for the Seminar is «Use of Community Resources in Providing Low Cost Primary Education» and you have requested that participants prepare «Thinking Papers». I am aware that the topic for your last Seminar was : «Effective Delivery of Mass Primary Education».

From this background I have decided to ask questions and raise issues under the canopy of «The Growing Demand for Education in the Third World».

The problem seems to me to be two fold : We want effective mass education and we want it at low cost perhaps through the use of Community Resources.

Now the following questions and issues readily come to mind. Why do we need Mass Education ? What is Education, anyway ? What is effective Mass Education ? Is schooling the same as Education ? Is education synonymous with the acquisition of knowledge ? How do we know that one has been educated ? Is mass literacy the same as mass education ? Is effective mass education possible without schools ? Is it possible to provide formal education under school system at a lower cost than we are doing today ? Is informal education the only effective answer to the high cost of formal education ? Are there other alternatives ? What is the case with developed Countries ? Is it possible to narrow significantly the ever-widening cultural lag between the developed and the underdeveloped countries through informal education ?

I do not pretend for a moment to know the answers to these questions but I should attempt in this discussion to present certain views with regard to some of them, if only to raise more questions or even play the devil's advocate.

It is now an acceptable fact all the world over that in order to live effectively and satisfactorily in the modern age education is necessary for all the people and

should continue through adult life. But it is also a fact that due to the generally low level of economic development in most of the developing and the ever rising cost of formal education, it is becoming impossible for most of these countries to afford the cost of formal education for all their citizens. And with increase in population and technological advances the demand for education is forever increasing. But at the same time the cost of formal education is increasing, in some cases, at much faster rate than the national budget. Education alone accounts for some 40% of the annual budget of some states in my country. I do not have the figures for the South East Asian Countries.

But we are informed by economists that education is a prerequisite for economic development; that it is the master determinant of economic growth; that it is the key to modernization; and that it is a necessary and sufficient condition for political emancipation. For as Thomas Jefferson stated several decades ago, «any nation that expects to be ignorant and free expects that which never was and which never will be». And as he stated in another instance: «What, but education, has advanced us beyond the conditions of our neighbours? And what chains them to their present state of barbarism and wretchedness, but a bigoted veneration for the supposed super-lative wisdom of their fathers, and the preposterous idea that they are to look backward for better things, and not forward...»

From all this it would appear that we in the developing countries have found ourselves in a vicious circle. Education, we have seen is necessary for all; but we cannot provide formal education for all because we are poor; and we are poor primarily because of our low level of education.

It is also a fact that much of the formal education being provided in the developing nations being largely copied from practices in the developed nations, is generally irrelevant and not sufficiently geared to the needs, the circumstances, and the aspirations of the developing nations. Consequently in most cases there is always the acute problem of the unemployed and unemployable school leavers without saleable skills. And the number of such cases, in some countries could be staggering. I do not know what the figures are in the South East Asian countries but in Nigeria less than 20% of Primary School leavers enter Secondary educational institutions or receive gainful employment. So the investment in formal education is not really paying the expected dividend.

Part of the problem is with the concept of education -- that is, with the kind of education provided, -- its contents, its orientation, and its methodology. I like Alfred North Whitehead's definition of education. To him «Education is the art of the utilization of knowledge» (Whitehead).

From this definition education is more than the acquisition of knowledge ; it is more than an ornament ; and it is not exactly the same as schooling. Education for what ? is, of course, an age-long issue. From all indications it would seem that here in South East Asia you are interested in education not as an ornament but as a practical and functional instrument for national development. Then the real issue is how to provide it to the mass and at low cost.

In an article entitled « No More Schools » which is published as an insert in the Innotech Newsletter No. 8, hypothetical approach to the problem was discussed. I found the article extremely fascinating. The proposals are extremely interesting, hypothetically promising, but possibly functionally intriguing. Mass application of educational technology in village mass education programme is indeed fascinating. But any form of technology under any conditions can be hazardous and the hazards of a village mass technology could be stupendous.

Two cassette players in a village are a lot cheaper than a teacher. But how long can they last when used by some 200 children ? And it requires highly trained teachers to prepare good modules. And if the modules are to be meaningful, relevant and realistic, they have to be different for different localities (for certain subjects in any case). How about the gargantuan problem of programming the use of two cassette players by some 200 children who will not be on the same modules at the same time ? How about the problem of discipline which could be enormous even under the school system of one teacher classroom situation and with all our psychology in the bargain ? Perhaps the issues here are in a sense similar to that of automation. The cassettes may replace teachers but it requires highly trained teachers to prepare them and well qualified technicians to service them.

The use of paraprofessionals is becoming popular in education but there is always the problem of their normal limitations in knowledge and expertise.

The proposed integration of formal and non-formal education into a single system is to me extremely attractive and should be fully explored. In the same view one would recommend an integration of the system of schools with wider use of community resources.

Teaching and Learning

Here it may be necessary to add a word about the teaching-learning process. Today teaching is being viewed as more than the transmission of knowledge ; and learning is being regarded as more than the acquisition of knowledge and skills.

The innovative approach in teaching today is movement toward the development of more personal insight and improved human relationships. Attention is being focused on the development of the learner's attitudes and behaviour patterns. In general, therefore, the teacher's aim is to provide, through positive reinforcement, environment that will make learning more interesting, more satisfying and more lasting. Thus in methodology emphasis has shifted to meaningful understanding, thoughtful analysis, active participation and discovery.

In fact, it is my belief that one of the most effective methods to bring about desirable educational reforms is through adequate reforms in teacher education and training. It is said that education unlocks the door to modernization. But in my opinion, it is the teacher that holds the key to the door.

To me education is similar to medicine and the teacher can be compared to the medical doctor. Perhaps the difference is that while latter deals with the physical and mental health of the child the former deals with the health of the whole child. Another difference is that the doctor's "mistakes" are more glaring than those of the teacher. They are immediately buried while these of the teacher are kept-alive and only seen by those with discernible eyes.

Community Resources to Supplement Rather than Supplant Schools

I agree that schooling is not necessarily the same as education. But I also believe that schooling is not anathema to education: therefore I submit that the problem of the provision of mass primary education with limited funds can be given a two-pronged attack.

- (i) I believe that it is possible to maximize the use of community resources and thereby reduce cost but;
- (ii) I also believe that it is possible to mobilize community resources for the provision of the necessary funds for mass primary education under the school system.

The first kind of attack could be done in various ways. One method is the system of «No More Schools» discussed in the newsletter No. 8, or more correctly, perhaps, the use of the community as the school and members of the community as the teachers. The problems with this system have already been identified. Another method is the use of the so called non-formal education systems.

According to Sheffied and Diejomaoh (1972), non-formal education programmes are supposed to serve the following needs :

- (i) as an alternative for those who lack the opportunity to acquire formal schooling ;
- (ii) as an extension of formal schooling for those who need additional training to get into productive employment, or become self employed ; and
- (iii) as a means of upgrading the skills of those already employed.

Teaching By Correspondence

One of such non-formal education programmes is teaching by correspondence which could be an effective means of improving mass education. Correspondence courses have become popular in many places because it is now no longer the view that education is the occupation of childhood in preparation for life and living, and that earning a living is the occupation of adult life. The concept of continuing education, even on part-time basis, is now the order of the day. And correspondence course is one of the methods to achieve this.

VOCATIONAL IMPROVEMENT CENTRES : A NIGERIAN SOLUTION TO VOCATIONAL EFFICIENCY WITH LITTLE FORMAL EDUCATION

Another system of non-formal education which has been found very successful in Nigeria is that of Vocational improvement centres.

In Nigeria skilled artisans or craftsmen are invariably trained through the apprenticeship system. The major problem in this system is the fact that most of the master craftsmen are not well trained themselves and lack adequate level of education necessary to impart successfully the theoretical principles underlying their trade.

The apprentices themselves also lack adequate education. At the end of their apprenticeship they receive no certificates from their masters or even when they receive certificates they are not recognized by anybody. The master craftsmen, of course, find it impossible to employ all their apprentices at the completion of their apprenticeship so they are obliged to look for employment elsewhere. But nobody could employ them generally because of the absence of recognizable certificates.

It is to solve those two problems, namely :

- (i) inadequate training ; and
- (ii) lack of certificates,

that the vocational improvement centres were established.

The centres provide both shop and classroom training for artisans with little formal education and prepare them for a Ministry of Labour Trade Test.

The centres are organized with the aim of their being simple, inexpensive and closely adapted to the needs and resources of the area to be served.

Supervisors and Instructors are appointed on part-time basis in order to reduce cost and existing facilities like school buildings are often utilized.

COMMUNITY SCHOOLS

The alternative attack to the problem of high cost of mass primary education is the mobilization of community resources for the provision of the necessary funds to finance education.

The common practice in most of the developing countries is for the Governments to attempt financing all education directly from public revenue. This has been found to be extremely difficult and the governments are finding it impossible to provide formal education for all their citizens. But it has been found that by making education a shared function between the Government and the people, it is possible to increase significantly the provision of educational facilities.

Perhaps the Harambee schools in Kenya is a good example of this system. In Kenya the concept of 'Harambee' has been used to expand secondary education for the people. The word 'harambee' symbolizes hard work, spirit of brotherhood and togetherness, united effort and communal responsibility.

These concepts were utilized in the establishment of harambee or self-help schools by communities through free labour and local contributions. The Government normally comes in to assist self-help schools that have reached and maintained certain standards and this acts as an incentive for the spread of the schools. In 1971, for instance, there were 809 secondary schools in Kenya and some 460 of these were harambee schools.

To summarize, in this short paper, I have tried to do two things ; namely, I have raised a number of issues which I consider to be pertinent and I have tried to make recommendations based on experiences elsewhere.

From all this it is clear that mass primary education is not only necessary for economic development, it is imperative for national survival in this modern age. It is indeed necessary for the proper foundation indispensable for the production of needed high level manpower, very much required for the eventual bridging of

the ever-widening gap of cultural lag between the developed and the developing nations ; and it is imperative for the identification and selection of future scientists and engineers required for real technological take-off. But it is also clear that formal systems of the world are finding it increasingly difficult to provide effective mass primary education for all their citizens.

In the quest for a solution to this dilemma many questions come to mind. Is education synonymous with schooling ? Is it possible to provide effective mass primary education without schools ? Can community resources effectively and efficiently supplant schools ? How about mobilizing community resources not only to reduce cost and replace schools, but also as a source of providing needed facilities to expand schooling ?

From a discussion of some of the above issues, it is my belief that rather than replace schools, it is possible and perhaps preferable to use community resources to supplement rather than supplant schools. In the 1980's therefore, instead of 'no more schools', we may talk of 'Community Schools' or the community as the school.

We have had « schools without walls », « open schools », and « open universities » ; it may be logical to move to « No More Schools », but perhaps, this is rather too fast — How about « Community Schools » ? Thank you for listening.

B. O. UKEJE
Professor of Education

USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION

by Mr. BOUNTHONG VISAYSACKD
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Laos is one of the developing countries, where nearly 80% of the population live in villages with less than 5000 inhabitants, in the traditional framework of a village economy which barely provides for family requirements; this subsistence economy is characterized by a rigid self-sufficiency where household consumption matches household production.

Laos is a country steeped in Buddhism which is not only a religion, but a civilization, a way of life. The monks are the priests of the Buddha's teachings, but they have always been seen also as teachers responsible for educating the minds of the people. Each village has a temple, which from time immemorial has been as much an educational as a religious centre where every Lao could stay for a time to receive instruction, and even training for a job; the temple was, indeed, the only place where teaching could take place. Even now, every Lao - especially in rural areas - will don the yellow robe for a varying length of time and, while staying in the temple, learn not only the Buddhist prayers and psalms but also how to read and write.

Time has not eliminated this traditional popular education but it is gradually losing its importance as it is being replaced by the new system.

— If one estimated the school-age population at 20% of the total population, then there would be approximately 606, 600 children. The number of children already enrolled in 1971-1972 in public and private schools was about 265,923, which amounts to only 43.8% of the number of school-age children.

— The rate of illiteracy remains high and more prevalent in rural areas, especially among the girls and women who constitute a group considered as incapable of contributing to national development.

— The national education budget for 1971-1972 represented about 11% of the State expenditures (or 22% of the national resources, not including foreign

aid), and the share of primary education amounted to nearly 61%. While the educational budget increased by 12% from 1969-70 to 1970-71, and by 11.8% from 1970-71 to 1971-72, the share of primary education grew by 15.7% and 7% respectively. However, almost 99% of the total is spent on staff costs, leaving only an exceedingly small amount for operating schools and services.

All these factors bring a better understanding of our difficulties, as well as an appreciation of the substantial efforts which have resulted in considerable progress in increasing enrollment and especially in the rapid expansion of elementary education which, quantitatively, surpasses the maximum foreseen in the longterm plans developed by the Regional Consultant Mission of UNESCO for Educational Planning in Asia.

Community Education Rural Centres (CERC's) were initiated by the Ministry of Education in 1962 with a view to facing budgetary limitations and enrolling as many children as possible. They serve simultaneously as lower primary schools, youth centres and adult education centres. A CERC may be any of the following:

— a temple school, founded in any village where a temple is in existence; or.

— a public primary school, or.

— where there is no temple or public primary school, a rural school built on the villagers' own initiative with a teacher (sometime working part-time) selected and maintained by the community.

Under pressure from the people's ever rising expectations of the education of their children, most CERC's have gradually turned into elementary schools with a single class divided into three grades. The only difference between them and the public schools is that their teachers are not civil servants. The government pays them monthly allowances which range from 3,000 kip (1 US\$ = 600 kip at the official rate) for beginners to 6,000 kip for those who have participated in at least four upgrading seminars. The allowance is supplemented as needed by parents' contribution in money or in kind.

Although in 1962, the government envisaged the establishment of 1,500 CERC's within three years, the insecurity prevailing in some rural regions, the difficulty of communications and the scarcity of national resources, have permitted the opening of only 891 so far. Their work is supplemented by that of the monks and the military (especially in remote areas and dangerous operation zones). In order that isolated communities may benefit from education, the rule that a minimum of 35

children aged from 6 to 9 is necessary for an elementary school to be created has been waived in the case of CERC where there are 960 teachers for 23, 448 pupils, or a pupil-teacher ratio of slightly less than 25 : 1.

— CERC teachers are recruited from among the young people of the villages who have completed 6 years of primary school.

In conclusion, I could say that, in consideration of the restriction of the actual budget and the lack of teachers, in order to extend education, even primary, to all the people, Laos will be obliged--not without justification--to call on the communities to contribute usefully and effectively to the expansion of education. The villagers are responsible for the support of CERC teachers and to construct certain buildings. They have an association, a Parents' - Teachers' Association as well, school which works side by side with government officials for development and progress in education.

« A TIDE IN THE AFFAIRS OF MEN »

by DONALD G. SIMPSON

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International Development Research Centre,
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The man responsible for first getting me involved in international community development work was the late Dr. James H. Robinson — the creative, compassionate Black preacher from Harlem in New York City. Among his varied talents was his vast knowledge of the works of William Shakespeare and back in 1959 when Jim Robinson was arguing the necessity of building bridges of understanding between young Africans and young North Americans he frequently finished his appeal by quoting the words which Shakespeare had put in the mouth of Brutus as he and Cassius considered their strategy for the Battle of Philippi.

There is a tide in the affairs of men
Which taken at the flood leads on to fortune ;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures.

Applying the Shakespearian analogy to the field of educational development can we identify some « tides » or « currents » which should be followed ? The question before this gathering is the use of community resources in education. I might be expected to analyze the Canadian examples which might be of most use to you.

There is a great impetus at the moment in Canada and indeed throughout North America to break down the isolation of schools from the communities they

are supposed to serve. This drive is exemplified in the many projects which utilize parents as volunteer teacher aides in the classroom as well as a variety of efforts to utilize factories, office buildings and community institutions as alternative learning environments for school students.

In recent years in my home Province of Ontario there have been a number of official reports which attempt to grapple with the new educational approach needed for the present era. The first one to appear was entitled *Living and Learning*¹ which among other things concerned itself with the learning programs necessary for «the child in society». This committee argued that the students should not be treated as isolated entities but should be educated for life in a society which respects his or her individuality.

The universities of our country are not exempt from this enthusiasm to link the school and the community. A report on the future of my own university in London, Ontario was entitled «Towards a Community University». The recent Provincial Government report on post secondary education in Ontario includes among its many recommendations the idea that university and college programs should be more fully integrated with opportunities for practical experience and practice in the community.

The financial implications of all these developments are not being ignored as the government also has established a committee to examine the costs of education for the elementary and secondary schools of Ontario in relation to the changing aims, objectives, programs and priorities of the educational system. The reports of this committee might be of some interest to some of you².

The latest report which attempts to link together the community and the school is the «Interim Report of the Select Committee of the Legislature on the Utilization of Educational Facilities». The sub-title of their report gives us a clear indication of their bias. «The School Must --- reflect its community, be part of its community, serve its community and have its community serve it³».

In preparing for this seminar I experienced an initial urge to concentrate on exposing you to many of the exciting projects underway in Ontario with regard to the use of community resources in the schools. In St. Marys, a small

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- (1) *Living and Learning* the Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario (Toronto, 1968).
 - (2) **Committee on the Costs of Education Interim Report No. 1, 2, 3.** (Toronto, 1972).
 - (3) **Interim Report Number One of the Select Committee on the Utilization of Educational Facilities** (Toronto, 1973).

town in the mixed farming area of Southwestern Ontario one could find on any given day senior citizens of the community fascinating the young children with stories of the early history of the town or working with them in the home economics room spinning wool taken from local sheep or making flour and butter and baking pioneer bread. The children no doubt learn a great deal of factual material from these sessions but the program is also aimed at other social problems; on the isolation of age groups, the lack of a sense of culture and the rootlessness of people who feel no ties with the land and lack a historical perspective.

In the northern mining community of Sudbury where I was raised and where my father slaved as a « mucker » underground in cramped damp mine shafts 12 to 14 hours a day seven days a week, before the days of unions, a recent program has been developed by the schools and the mining companies to introduce the students to the procedures, problems and potential of the mining industry — its role in their community and its role in the world community.

In Ottawa the Nation's capital some schools regularly bring into the classroom a great variety of workers to discuss their lives with the pupils. Salesmen, policemen, shopkeepers, shoemakers, and politicians have all been given an opportunity to share their view of the community with the youngsters. Can you imagine turning over your class for an hour a week for six weeks to two sewer cleaners. The children of Ottawa were delighted with the opportunity to question such men about their interpretation of what was wrong and what was right in their city. This then is another view of the use of community resources in Ontario.

The project which excites me the most is one which is centred at our own College of Education and is now exerting an influence in communities across Canada and throughout the United States. It is Paul Park's « Early School Environment Programme » which can perhaps best be categorized by the theme « A Child's World and Welcome To It ». The program has attempted to assist teachers in taking a serious concerned look at the interests, values and problems of the children in their class and to utilize something in which the student is interested as a starting point for learning. In a core area school in a large city the starting point may be the cosmetics and hair sprays in which the young girls are becoming so frantically interested. What qualities does each hair spray have? Can we test them against the claims made by the television ads? Are there any health hazards involved?

In other schools the starting points more often may be animal life. Most of the subjects for such studies are found in nearby ponds or streams but for one year back in 1968 when I was sharing office space with Paul my room was filled with cages of Gerbils, a small Australian dessert rat which makes an excellent subject for classroom study in the primary schools.

In Goose Bay, Labrador the young boys earn pocket money by snaring rabbits which they sell on the street corners on Saturday night. Thus, when Paul Park went there to run a teacher workshop he made the snaring of rabbits his starting point. At the Hudson's Bay Post he bought various kinds of string, rope and thin wire and got the boys started on testing their comparative strength, flexibility, longevity and cost once again taking the learner where he is at and using his present interests as a starting point for meaningful learning experiences.

Frivolous as some of the items might appear each situation is used to assist students in developing the ability to gather data, organize it, record it in a systematic fashion, and analyze it. The teachers continue to cover all the basic skills although they may not be utilizing all the basic school materials. Few materials are purchased by the schools, but rather come from the parents and shopkeepers of the community who are made to feel by the teachers that they are an essential resource in the school program.

Paul Park's attempt to make our schools reflect the interests of the community has brought to light a number of key issues that have to be faced and the preparation of teachers to this new approach is without a doubt the crucial factor. The written and film reports of this project may raise some appropriate questions for you to consider.⁴

Two concepts appear to underline most of these projects concerned with the use of community resources.

1. That education must be seen as a lifelong process and
2. That education is not confined to the facilities which have in the past normally been designated as educational facilities.

Some advocates speak of this as a need to concentrate on non-formal as opposed to formal education programs.

I applaud many of the Canadian efforts to develop educational alternatives as being appropriate responses to the communities' demand for increased access to education, individualized instruction and increased efficiency. I am one of many in Canada who have been pushing for community involvement in the schools and for the utilization of community resources for the school programs. I have submitted proposals to the Provincial Committee studying the cost of education in the

(4) **The World of Child** Profiles in Practical Education No. 2, The Ontario Institute for Studies in Education. (Toronto, 1971).

schools of Ontario⁵ and in terms of setting up alternative learning environments I was part of a group responsible for developing the Cross - Cultural Learner Centre in London, a computerized multi-media resource centre being utilized both by the community and the school population⁶.

Having said all this I find myself reluctant to elaborate further on the Canadian examples and I hesitate to advocate them as appropriate models for your part of the world. There are many reasons for this feeling, one of which is the observation of the extent to which education is rooted in a culture and the schools are used as a major means for passing on the cultural values of the community in which a person lives.

Let me give one brief Canadian example to illustrate my point. Wilfred Pelletier, a North American Indian uses the specific example of how a child learns about the physical objects around him to show how the educational structure in this situation reflects and helps teach the child social values which he will use later on within the community⁷. The Indian child is not taught that this is mommy, daddy, desk, ashtray, house etc. Rather the child is left free to relate to objects as he wishes, learning adult names and relationships for them only as he listens to adults in conversation with each other. Thus, the child learns to relate many ways to an object. For example, he might turn a chair over, cover it with a blanket and use it for a house, since adult values on things are not necessarily instilled in the child (i. e. the chair is only used for sitting on). This educational environment allows the child to develop a great deal of creativity with respect to the growth of relationships. It also reflects and teaches one of the practiced ethics of the community ; non-interference. Indian social interaction involves standing quietly and listening and speaking only when acknowledged. Thus, the parent does not interfere with the child's exploration and growing relationship to his environment, and the child in turn learns by observing and feeling rather than being told about things. Thus, the organizational structure of this early informal educational environment reflects the way of life of this community.

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- 5) A.E. MacKenzie, S.L. North and D.G. Simpson, **Submission To The Committee on the Costs of Education in the Elementary and Secondary Schools of Ontario**. (London, October 30 1972).
- (6) See A.E.D. MacKenzie, S.L. North and D.G. Simpson, **The Cross-Cultural Learner Centred Environment — An Educational Alternative** — a speech presented to the Vienna Rotating Seminar on Universities and the Quest for Peace. (Vienna July 1972).
- (7) For further details see Wilfred Pelletier **For Every North American Indian Who Begins To Disappear I Also Begin To Disappear**. (Toronto, 1971).

It is clear that we have had difficulty in my country allowing certain disadvantaged groups to utilize the resources of their own community to build a meaningful school program for their children. The realization of this tempers my enthusiasm for suggesting to educators here in Southeast Asia ways in which they can best make use of community resources.

I would like rather at this time to raise some of my concerns about the way in which educators from the West backed by some of the funding agencies may sometimes allow their enthusiasm for innovations in their own society and their global interests in education to cloud both their awareness of the cultural uniqueness of much of the education process and the fact that peoples demands for education usually reflect the social realities of their society rather than the theoretical models of the international educational planner. I am concerned with some of the new thrusts being suggested by some of the aid organizers. Following that I would like to stick my neck out and suggest areas of priority for educational research. Finally I would like to react to the INNOTECH Delivery System project and its attempt to utilize community resources.

HAVE THE AID AGENCIES A NEW STRATEGY WITH REGARD TO EDUCATIONAL PROJECTS FOR DEVELOPMENT ?

It is impossible to give a definitive answer to this question for all aid agencies. It is clear, however, that some donor agencies have concluded that the educational expansion of the sixties failed to meet the requirements for development. They point to chronic and rising unemployment among the educated, irrelevant imported curricula and a failure, in particular to meet the needs of rural development. Readily available statistics on wastage and cost are also used to substantiate their position that the present system of education has failed abysmally. The prognosis which often follows from this diagnosis is :

« What is required is radical and massive educational change and a complete re-ordering of priorities. »

WHY IS THERE SUCH AN INTEREST IN MASSIVE RADICAL NEW APPROACHES TO EDUCATION ?

It would seem to me that among the many problems confronting ministers of education in Third World countries, there are two which I expect are of particular concern to all of them :

1. The increase in the unemployment of educated persons,
2. High budget costs and increasing social demand for schools.

These concerns are shared by the international donor agencies but quite often it seems to me the outsiders want to add on to these two concerns whatever is current in educational experimentation in North America and Europe.

These include such items as Illich's ideas on de-schooling and a concern for the democratization of education. The concern for democratization and the concern for social justice tends to lead one towards non-formal education particularly in view of the rather disappointing results of compensatory education programs for minority groups in North America. One of the unifying themes in the arguments put forth by western proponents of non-formal education in the Third World is their attack on the formal system for fostering elitism.

WHAT IS WRONG WITH WHAT IS BEING SUGGESTED ?

The diagnosis put forth by those in favour of massive radical change rests on at least two general assumptions neither of which may be valid.

- 1.— that the present system of formal education has been seriously tried and has failed.

The question here is to what extent the present system has been given a chance to work. In its present expanded form of mass education the present system has in most less developed countries been operative for less than 20 years and 20 years is rather a short time in the evolution of a system as complex and diffuse as the school. In other words there may be a lack of historical perspective in the diagnosis.

If we look at the realities of the primary school classrooms in many towns and villages, it might be fair to say that the present system in many cases has not yet been given a fair trial. The realities of the primary school more often than not include few or no books, untrained or absent teachers, insufficient seating, no chalk or blackboards, a building that is flooded in the rainy season and children who walk many miles to school and work all day without proper nourishment.

- 2.— That educational systems can be viewed by the planners mainly as a passive instrument of social policy which can be altered by them and replaced with new policies which will easily receive community support.

It must be an excessive enthusiasm for the new approaches that leads planners astray on this point for it is difficult to believe that many could support the above assumption if faced with it in such stark terms. Nevertheless there are

some who continue to promote policies which neglect to consider the needs, expectations and dreams of the people in that particular community.

For example, numerous developmental economists are busy gathering data on rate of return studies to determine what area of education should receive priority. Their statistics (of dubious reliability) put them in agreement with many educators who are pressing the case for primary education. Some of these same economists are advocating ways of cutting the social demand for education and of restraining the rate of expansion of educational opportunities.

Given the vast numbers of children not in school at the moment and the high budgets for education this is a compelling and logical view but one that cannot be sustained in many communities given the expectations that people have. Let us take an example from Nigeria which recently has gone through the lengthy process of re-examining the goals of their educational programs. As a result of deep consultation with people in the community they are recommending to the government among other things, that there be automatic promotion for all students from primary to secondary school, that secondary school be changed to a 6-year program, and that the University course be changed from a 3-year to a 4-year course. These are further indications of the pressure to provide more schooling opportunities for a wider segment of the population. The cost implications are horrendous but then I am not telling you anything of which you are not already well aware. This is one of the major concerns which has led to the INNOTECH Delivery System research project.

What I am underlining is the view that the school has become a social institution, that education and social change go to the very roots of personal and family life. Regardless of the problems associated with schools the parents are not going to allow them to quickly disappear or to follow the dictates of educational planners or international agencies.

Let us consider three additional new priorities often suggested by the advocates of radical change and see the extent to which they relate to our concern with relating the school to its community. These priorities are the ruralization of schools, the extensive and elaborate use of educational technology and support of non-formal as opposed to the formal system.

I. RURALIZATION OF SCHOOLS

It would appear at first glance that this suggestion is an attempt to have the school relate with its community and reflect that community. The assumption behind most notions of ruralization of schools is that the requirements of rural

youth are different from those of urban dwellers. This, in turn, assumes that children born and educated in rural areas would remain in the rural areas if they received a different type of education. The train of this argument is that if schools were made more relevant to their rural environment and that if farming were effectively taught in the schools then school leavers might become farmers and not drift to the towns and cities. At first glance it looks like a reasonable suggestion. But a little exploration shows us that this idea has been around for many years. In the African setting it was part of the recommendations of the Phelps-Stokes report in the 1920's and has been raised periodically ever since. It has not taken root essentially because it does not give the people what they want. As long as the social reward systems remain as they are I expect that rural people will fight for the opportunity for their children to obtain the social and economic benefits of an education no matter how great the odds against them are. Anything that appears to indicate that the educational opportunities for their children should be restricted to a rural environment will no doubt be seen by them as second class education and will be rejected.

The proposals for ruralization then rather than being a response to the felt needs of the community may be another attempt by planners to manipulate people in order to solve some major political problems.

Supposing one could get people in a rural area to endorse this concept of education there is then the additional question as to whether or not such a system of education is in fact pedagogically sound. Archibald Callaway has dealt with this issue in his article «Educational Planning and Unemployed Youth in Africa» when he attacks the concept of the ruralization of schools by saying «pupils who complete the primary course should be able to read and write fluently in their own and in the national language, to do a certain amount of arithmetic, to understand enough science and history to interpret the world around them, and to learn sufficient civics to be made aware of their rights and responsibilities as citizens. This does not make pupils into farmers or carpenters or nuclear scientists : it is basic to all these careers. Education is not meant only to adapt pupils to their society, but also to equip them to alter it. And it may well be that widespread primary schooling provides the foundation for modernizing agriculture-- not by trying to teach pupils to become farmers, but by giving them the tools of literacy and the confidence to try new techniques⁸.» The desires of the youth and their parents may therefore be at great variance with the planners notion of «ruralizing» rural schools and if this is the case the prospects for the success of such a program are very remote indeed.

8 Archibald Callaway, «Educational Planning and Unemployed Youth in Africa» in **Approaches to Employment Problems in Africa and Asia** (Commonwealth Secretariat, London, 1973).

II. EXTENSIVE AND ELABORATE USE OF EDUCATIONAL TECHNOLOGY

I have been a consistent worker in my own community for the development of educational technology as a learning tool, but again find myself with little enthusiasm for suggesting it as the method for a major breakthrough in developing countries especially if we define educational technology as so many people do as the extensive use of television. For twenty years there have been predictions in North America that education would soon be revolutionized by the technologies of communication. James Koerner in a recent article entitled « Educational Technology — Does It Have a Future in the Classroom »⁹ indicates that the initial enthusiasm in North America of leaders and futurists from the knowledge industry, from government and from education has given way to embarrassment as their rosy prophecies have not been realized. Koerner is not attacking the idea of experimenting with the uses of educational technology. Rather he is cautioning against expecting it to do too much in coping with the relentlessly rising costs of education. He goes on to say that 'or school boards and college trustees to look to technology for rescue at this point in time is like expecting the Wright Brothers to put their first aircraft into commercial production and carry passengers around the country in it.

Similarly let us not expect too much of educational technology in your communities. Some will claim that the new technology will be able to (a) reach wider audiences (b) reach them more effectively and (c) more cheaply than conventional classroom teachers. An examination of the projects underway should leave one with some real questions. Jim Sheffield of the Centre for Education in Africa at Columbia University writes that « Bitter experience has shown... that such efforts usually remain exotic transplants, funded and staffed largely by outside agencies, with little spinoff effect on the indigenous system they were designed to help. Motivated in part by a desire to by-pass the poorly educated local teachers, many technological innovations flounder eventually on the very personnel they were unable to ignore.»¹⁰

The western proponents of massive technology leave themselves open to the criticism of either (a) trying to use developing countries as a testing ground for experiments which we have not been prepared to try ourselves or (b) trying to provide a wider market for our technology hardware.

(9) James Koerner, « Educational Technology — Does It Have a Future in the Classroom » **Saturday Review of Education** (May, 1973)

(10) James Sheffield « Education Technology and Development — A Critical Reappraisal » unpublished paper February 1973.

III. SUPPORT OF NON-FORMAL EDUCATION AS OPPOSED TO THE FORMAL SYSTEM

Let me deal first of all with that minority of non-formal advocates who are staging direct attacks on the established system and calling on men to "de-school society" in order to reform society. This position is put forth most forcefully by Ivan Illich whom you have heard at one of your earlier seminars. Illich writes "America's commitment to the compulsory education of its young ... now reveals itself to be as futile as the American commitment to compulsory democratization of the Vietnamese, Conventional schools obviously cannot do it. The free-school movement entices unconventional educators, but ultimately does so in support of the conventional ideology for schooling. And the promise of the educational technologists, that their research and development — if adequately funded—can offer some kind of final solution to the resistance of youth to compulsory learning, sounds as confident and proves as fatuous as the analogous promises made by military technologists. I believe that the contemporary crisis of education demands that we review the very idea of publically prescribed learning, rather than the methods used in its enforcement¹¹."

I accept much of the criticism of educational systems which this group has made but find little to commend in most of their anarchistic, nihilistic romantic indeed selfish notions about "de-schooling" and what would follow. One of the best critiques of their proposals has been written by Ronald Dore of the Institute for Development Studies in Sussex, England¹². He expresses anger "at the evidence, either of insensitivity to the real sufferings of a large part of mankind, or else of that same capacity for self-deception which enables the questioning, protesting youth of North America to mistake their own self-regarding concerns for social concerns, and to conflate their own identity crisis with the crisis of their society." He charges that their prescription is for an individualistic, selfish, play orientated educational system "and that whatever its virtues in a North American context, to prescribe such an educational system as suitable also for poor societies which must struggle to keep their population barely alive, shows culpable insensitivity."

But enough of the radical de-schoolers for they are only a minority group among the advocates of non-formal education, and their ideas have not captured the imagination of most policy makers in the aid agencies.

Two years ago Jim Sheffield and Victor Diejamaoh published their study

(11) Ivan Illich *Deschooling Society* (New York, 1971) p 65.

(12) I.D.S. Discussion Paper No. 12. October 1972.

on non-formal education in Africa which introduces us to a wide range of educational opportunities carried on outside of the regular graded classroom and geared to preparing people for employment (13). They admit that it is difficult to isolate a conceptual model which could be easily transferable and stress that the key to the success of most projects was not the technique of training but the links to the job market. The successful programs they observed (and there were many) were often small scale and in most cases the program would have been ruined by overloading it with many students and more money in an attempt to expand the output. Thus, although the sponsors of the study were anxious to find a model or models that could be expanded, Sheffield speaks of micro solutions to macro problems and makes no great claims for non-formal education as an alternative to the formal system.

Others are more forceful in their advocacy of the non-formal approach. Among this group there appears to be an underlying assumption that non-formal education will enable governments to deal with the two major problems of unemployment and low productivity. It is clear that some training programs carried on outside the graded classroom have been successful in preparing people for available jobs. The question is can these programs be expanded and duplicated? Even if they can, are we talking about an **alternative** to the formal school or are we talking about something different?

There is another element to the issue of non-formal education. Not only is non-formal education being advocated as a better way of preparing people for work in the modern sector of the economy, it is also being argued as the way to prepare people for the informal (non-formal) sector of the economy. For some time in the past manpower planners concentrated their analysis more or less exclusively on what they called the modern (formal?) sector of the economy. At a later stage the economists began to pay much more attention to the large part of the working force which operates in the informal sector of the economy (bakers, carpenters, seamstresses, tailors, cooks, etc.).

Some educators, following the lead of the economists, have discovered this informal sector and would advocate a major shift of resources to provide training for this sector. It may well be that increases in efficiency in this sector will result in greater levels of capital formation and it may be that this sector offers partial answers to the requirements of increasing productivity and generating jobs. But the recognition that the informal sector exists is not the same thing as the comprehension of the structure of that sector and its requirements. Even less is known about how school age youth and their parents view this sector.

(13) Victor P. Diejomaoh and James R. Sheffield, **Non-Formal Education in African Development** (New York, 1971).

Clearly in the absence of such data, attempts to develop training programs oriented towards this sector can only derive from western experience (and one of the major criticisms of formal education is that it is based on western experience and inappropriate to conditions in the less developed countries). We need to know more about the community we are trying to serve. The need here is not for massive commitment or extensive structural reorientation, but for cautious experimentation to learn more about the structure, requirements, and limitations of the informal sector as an antecedent to discussions of curricular and educational innovation or reform.

It may be that a non-formal approach can provide some useful answers here in the long run. What I am saying is that we know very little about the non-formal system at this time and we should be leery of rushing ahead with massive funds for a new approach which may prove to be as dysfunctional as some of our past efforts to push countries to establish universal primary education long before they could afford the cost or absorb the school leavers.

The formal system is not likely to disappear ; it will survive and expand as will the problems associated with it. The real danger may be that in promoting a non-formal approach to education and in providing massive sums for those who respond to this stimulus, advocates of this position rather than making education more flexible, relevant and efficient may be primarily assisting in the development of a second parallel expensive system.

What will be the recurrent costs of this system ? If we were able to answer all other questions about this new approach, this would still be the key factor. If there is any area which requires responsible planning, it is the area of fiscal planning.

MY OWN POSITION -- RADICAL OR REACTIONARY

These questions which I am facing with regard to massive innovations in education have led me into a curious position. Accustomed as I am to be called a progressive (and by some a radical) educator in my own community I have come to the point where in discussions of educational developments in Africa and Asia I find myself being viewed as conservative (and by some as reactionary) in my views. This caused me confusion and consternation for a while but I am more comfortable with my position now.

I am not trying to suggest that there is no crisis in education nor would I want to support the views of those who feel no changes are necessary. It would seem clear to me that in various parts of the world we have to find new ways of educating people and ways of making educational programs more efficient.

However, the more I have discussed the various suggestions for massive radical change in education, the more concerned I have become that many of them represent intense speculation and sweeping judgments with little supporting evidence. It is irresponsible of westerners to advocate extensive education alternatives abroad knowing so little about the schooling system in those countries. Many donors are looking for the gross alternatives that will stimulate a massive change. The concepts are grand and exciting but perhaps in many cases they represent intellectual indulgences which the less developed countries can ill afford.

I would urge that rather than advocating massive changes there is a need to point out some of the unsupported assumptions about primary schooling and alternatives to it, suggest more effort to sort out what we know and what we do not know and support some more experiments and carefully evaluated try outs before broad scale structural changes in primary education are recommended. In the absence of a cautious, experimental posture quite negative consequences may well follow. This would reflect a failure to learn a lesson from the sixties when large sums of capital from developed countries were applied to beneficial social projects including the expansion of schools without fully appreciating the magnitude of the recurring costs which would have to be assumed by the recipient government.

Let us consider some possible research approaches under four general headings.

1. RESEARCH ON HOW THE PRIMARY SYSTEM WORKS

Here we might be interested in such questions as :

- Do parents care whether curriculum is relevant to rural areas so long as it enables children to have some possibility of advancing in the education and the social system ?
- To what extent and in what way do schools and universities function to distribute widely unequal life-chances and how do the consequences of schooling shape the motives of pupils parents, teachers and educational administrators ?
- Will a few hours exposure to practical courses have an enduring effect on skills and attitudes ?
- What motivates students to make different decisions about their future ?
- Can one isolate educational factors that assist people in becoming more

productive ? Is it mainly a matter of attitude ? Are there certain educational programs (for example study-service) that can influence attitude change ?

- What information do we have about how different teachers' qualifications and characteristics, management abilities of headmasters and school plant and equipment really affect learning and scholastic achievement ? (Do teachers with high certificates actually produce better pupils ? Is a pupil teacher ratio of 35/1 really necessary ?)
- What happens to the drop outs and the educated unemployed. For how long are they unemployed ? Is it mainly a matter of youth unemployment ? In developing a long-run employment-oriented strategy, is it essential to include proposals for reforming the education system or is it possible that problems in the present system have very little influence on long-run adult unemployment problems ?

We might concentrate on discovering areas where changes might be possible which might lead to making the present educational system more efficient. Some of these possible key change points are :

- a. Number and nature of learning materials for teachers
- b. Number and nature of learning materials for students
- c. Nature and cost of school buildings
- d. Age at which children begin school
- e. Duration of the school program (both within the school year—and the length of the program before termination).
- f. Financing of education
- g. Selection process and exams
- h. Administration of education
- i. Language of instruction
- j. Motivation of parents, teachers and students
- k. The teachers

If one is concerned about cost, the last one is most likely the crucial one for teachers' salaries consume the largest percentage of the budget. What can be done to change this ? Is it as some claim basically a matter of general employment strategy ? I think not. Let us search for ways of preparing and assisting teachers to be much more effective in dealing with a larger number of students.

I would like at this time to highlight one type of project which has great potential for dealing with a number of educational problems including the difficulty of finding and funding enough qualified teachers. Here I am referring to the great variety of study-service or national service programs that are evolving in various countries, many of which concentrate on making students available to serve as teachers for a specified period of time

One of the oldest of the National Service Plans is the Education Corps of Iran which enrolls school-leavers or drop-outs into a service program for education. Critics used to complain that the Shah of Iran had organized the program as a means of keeping young potential trouble makers under disciplined control and this may well have been one of his aims. But success of the «Army of Knowledge» seems to have gone well beyond the goals of security or defensiveness against juvenile delinquency.

Professor Abdolmohammadi of the University of Kabul wrote about an assessment that he carried out in 1970 :

« If the government of Iran had to meet the expenses of the projects which have been carried out by the people, encouraged by the Educational Corps members, such as construction of schools, baths, running water system and roads, the cost would have been overwhelming, and they could not have been accomplished ».

Independently in many countries schemes of this kind are being undertaken. A newer development is to include the community service work as a direct part of the students education — hence the term study-service. For example, since 1964 Ethiopian students have been taking a year out from their university studies to work in rural communities, a majority of them as teachers.

A striking feature of the growth of study-service schemes is the range of its sources of support. To begin with, the Governments that have established study-service schemes come from widely spread parts of the political spectrum, e. g. the Governments of Ethiopia, India, Indonesia, Nepal, Nigeria, People's Republic of China, Thailand, United Kingdom and United States.

Within individual countries, the spread of sources of support is also usually broad and frequently includes students, educational planners and administrators, development planners, field-level implementers of development activities, and politicians. I think it highly significant that these programs are able to generate support from so many parts of the community even though people working together to help establish study-service are often doing so for different sets of reasons or with different emphasis on particular reasons.

Besides making a contribution to meeting the basic needs of other people and providing an educational experience for the participant the study-service scheme can be seen as a significant training program and can be used as a catalyst or enabler for other significant changes in education. Study-service carries the image of service which is a « good thing » that it is difficult to find reasons to oppose. It tends not to carry the image of « Educational reform » which may be a dangerous threatening image to many conservative educationists.

Bold claims are now being made for this approach but little evaluation has been carried out. It would be useful to encourage such comparative research to grapple with such questions as :

- what effect does the program have on the recipients in the rural area ? Is there a development pay-off or is it mainly a useful educational experience for the participants ? Can it be used as a less expensive method of supplying good teachers ?
- what effect does it have on the participants ? Does it influence their further career patterns ?
- what effect does it have on the universities and other educational institutions from which the participants come ? Does it influence the teaching approach and the curriculum ? Does it influence research priorities ?
- how much does it cost ?

2. EVALUATION OF INDIGENOUS LEARNING SYSTEMS

As a second research priority I suggest that it would be useful to know more about different indigenous learning environments such as the traditional apprenticeship system. We know little about the informal sector of the economy and before we shift substantial resources into the training of people for this sector (as is suggested by the non-formal proponents) we should know a great deal more about this sector and how school age youth and their parents view this sector.

- how does this sector recruit its manpower ?
- what are its skill requirements ?
- nature and extent of the training programs it has evolved
- the incentive it affords
- the profit it realizes etc.

3. EVALUATION OF A NUMBER OF EXPERIMENTAL PROJECTS ALREADY UNDERWAY

The SEAMEO and Sheffield-Diejomaoh reports on non-formal education in Asia and Africa introduces us to some interesting educational projects (most of which are systematic and formal in their pedagogy, although outside the regular primary system). Philip Coombs' reports first for UNICEF and secondly for the World Bank add to the list.

What needs to be done now is to analyze the conditions under which these different programs are a success, and the ways in which they can be systematized and be made replicable. We may be surprised to find how few of these exciting local projects can be rapidly expanded into a national program. It is interesting to note, for example, that the Overseas Liaison Committee team sent to Tanzania to find non-formal projects for which the World Bank could supply capital support came up with only two feasible ones (i) the rural farmer training centre and (ii) the rural primary school now known as a village learning centre.

I would be interested in evaluations on these villages learning centres as well as such things as village polytechnics in Kenya, the College of the Air in Mauritius and Botswana, radiophonic education in a number of Latin American countries and the numerous correspondence education programs.

4. SUPPORT OF PILOT PROJECTS IN THE DEVELOPMENT OF NEW WAYS OF DELIVERING EDUCATION.

I cannot point to many specific projects which fit into this category but hopefully more will be forthcoming in the future. The Integrated Educational Development Project in the Benue-Plateau State of Nigeria although just in its formative stage appears to be a project that will be well worth examining once it gets underway. Another possibility is the experimental integrated rural development work being considered in Ethiopia. If the interested persons are able to establish an inter-ministry/university committee to construct a project involving the minimum agricultural package, the minimum formation education plan, and the rural work of the Ethiopian University Service, then it would be worth supporting.

Of particular interest to me, of course, is the INNOTECH Research Project on «A Delivery System For Mass Primary Education». I know of no other place where such a comprehensive experiment is being tried and I applaud you for your efforts. Almost all of the key change points listed earlier are up for consideration in this project.

Given what I have said earlier let me now raise some of the questions about your research project that are in my mind.

- I feel some uneasiness about the «No More Schools» title. Does it really imply the main thrust of this project ? Will it be a liability in gaining local support ?
- Potentially the most useful community resource is the people of that community. How will they identify with this project ? Will they have any opportunity to state their needs ? Will the researchers be in the villages enough to be accepted by the people living there ?
- Can the research operations centre be established in one of the villages ?
- Is there a possible problem that resource material will be produced by outsiders without involving local people ?
- One of the things learned from Paul Park's Early School Environment Project was the need to look very carefully at the selection and preparation of teachers. They found that a well organized new teacher preparation program was almost completely wasted if they took a teacher whose background and experience was in a large city and tried to get him to develop community based schooling in a rural environment. They found it important to use teachers who came from the communities which were very similar to the one in which the new project was being developed. Even in successful television education programs the role of the teacher is crucial. Telescuola in Italy which emphasizes almost total teaching by T.V. and correspondence courses reports «We have repeatedly had the opportunity to notice that the benefit which pupils derive from Telescuola corresponds directly to the zeal and education of the monitor.»¹⁴
- One of the key resources in each community then are the teachers already there. What arrangements then are being made to include the teachers of the local schools in the project area in the planning and operation of the project ? Can some of them become members of the research team ?
- Are steps being taken to have the participating teachers actually carry out an inventory of all the potential resources in their community that might be utilized by the school program ?

(14) R. P. Hearn, *Lessons Through the Air* (London, 1972).

- If a new delivery system is developed what arrangements will be made to absorb all the teachers presently working in the area ?
- The material is first of all going to be tested in the present school system. This raises the possibility that the project will end up by focussing mainly on just producing resources for the school system.

Assuming that the pilot projects are a success one is still left with the problem of multiplying the pilot projects across the system. C. E. Beeby has dealt with this type of problem in his sane little book « The Quality of Education in Developing Countries. » Beeby claims that « the failure of research to influence practice may be due in part to the fact that research workers have, with a few notable exceptions neglected the problem of how educational practices spread.»¹⁵ He goes on to say that it frequently happens that the research worker loses interest at the point, where, for the administrator, the experiment begins to be significant. What arrangements for the diffusion of the results of your research are being built into your project ?

I am sure that considerable attention has already been given to these and other questions and I look forward to learning more about your strategies.

CONCLUSION

I want to thank you for giving me this opportunity to share my ideas with you. I hope that these seminars will be held on a regular basis and that they will continue to serve as a forum not only for discussion of educational developments in the SEAMEO region but also for discussion of innovative projects being tackled in Africa, Latin America, the Caribbean and the Asian countries outside of the SEAMEO area.

In closing may I return to my opening reference to « the tide in the affairs of men ». If there is an inevitable tide which I wish to highlight it is not the tide of non-formal education, ruralization of schools and educational technology but rather the tide of the growing realization that changes towards the direction of a different life style for greater well being and dignity cannot in the long run be imposed on people. No matter how polite and sincere the outsider may be, educational policies and styles of organization should not be imposed from the outside-introduced-yes ! imposed-no ! I am convinced that the real dynamic for change has

(15) C. E. Beeby, *The Quality of Education in Developing Countries*
(Cambridge Mass. 1966). P. 107.

to come from within a society and ideas from outside when they are recommended incessantly against local wishes will usually acquire a bad image and become unpopular, no matter how constructive and positive the ideas are. Packaged programs of educational aid organized outside the community are an incomplete and sometimes irrelevant solution. In other words, maximum use should be made of the resources within the community whether the community we are talking about is a nation, a province or a village.

STATISTICS RELATED TO THE GROWTH OF PRIMARY SCHOOL EDUCATION IN SOUTH EAST ASIA

Compiled by : R.W. Smail
Consultant to SEAMEO

RED recently received statistical figures issued from AID reports for the SEAMEO countries, 1) percentages of enrollment by level 2) number of teachers and numbers of students, by level 3) National population figures for the same period. The following is an attempt to compile them with a view to providing some insights into directions for the Mass primary school Delivery project of Innotech. While the actual enrollment figures are 1968-1969, perhaps the levels and tendencies revealed indicate the directions the project must take and the scope of some of the problems to be faced in implementing its expansion.

Assumptions :

1. That an optimal/maximum percentage of age grade cohort enrollment in primary schools would never exceed 90% thus for any given target year a 90% enrollment figure would be the maximum, given what is known about bell shaped learning curves.
2. The 5-14 age group will continue to be the fastest growing segment of population in Southeast Asia for the 8 year period, 1969-1977, after which it will taper off somewhat. During those 8 years, it can be safe to assume the 5-14 age group will increase by at least 4% per year, overall.
3. That while the employment situation differs for each Southeast Asian country, one could assume that at least 4% of the existing teaching force will retire or die in any given year.
4. For ease in calculation if for no other reason, a projection of teacher student ratios of 1 to 40 by 1977 is reasonable. The present overall average for the region is 37.6.

Procedures employed :

The table was constructed utilizing the latest figures available.*

* **East Asia :** Economic Growth Trends. Statistics and Reports Division, Office of Financial Management, Bureau for Program and Management Services, Agency for International Development, August, 1973.

- 1) Column a is the reported population of the country.
- 2) Column b is derived by a straight lineal projection to 1977, using annual rate of growth times 8 years, without compounding.
- 3) Column c is derived by dividing reported primary school enrollments by the reported percentage of enrollment.
- 4) Column d is derived by adding 32% (04 x 8 yrs) to the 5-14 population of 1969.
- 5) Column e is the reported 69 enrollment.
- 6) Column f is a derived figure equal to 90% of the age group 5-14.
- 7) Column g reports the teaching force employed in 1969.
- 8) Column h provides the total required teaching force in 1977 for 90% enrollment of the 5-14 age group, at a ratio of 1 teacher to 40 pupils.

The statistics in this paper would indicate that alternatives to linear expansions of the SEAMEO school systems need to be developed.

**SOUTHEAST ASIAN STATISTICS RESPECTING
IMPLEMENTATION OF A MASS PRIMARY EDUCATION
DELIVERY SYSTEM BY 1977**

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COUNTRY	a POP 1969 (000,000)	b POP 1977 (000,000)	c (AGE 5-14 POP '69) (000)	d (AGE 5-14 POP 1977) (000)	e ENROLL '69 (000)	f ENROLL '77 (000)	g TCHRS 69 (000)	h TCHRS NEEDED 1977-(40-1)	i DIFFERENCE (h-g)
Indonesia	126.4	153.7	28,450	37,554	12,802	33,800	323.2	845,000	521,000
Khmer Republic	7.6	9.5	1,932	2,550	1,024	2,395	21.4	59,888	38,400
Laos	3.1	4.0	482	636	217	572	5.8	14,300	8,500
Malaysia	11.5	14.07	2,908	3,838	1,629	3,474	54.2	86,850	32,650
Philippines	40.8	51.0	10,130	13,371	7,394	12,033	234.2	300,825	66,625
Singapore	2.2	2.5	655	655*	367	589	12.2	14,475	2,200
Thailand	39.7	50.5	9,487	12,512	5,123	11,260	127.7	281,500	153,800
S,V.N.	19.3	23.1	3,142	3,791 (3%)	2,923	3,412	56.1	85,300	29,200

(.02 incr)

PRIMARY EDUCATION FOR REMOTE RURAL AREAS

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I am very honoured to have been invited to present some of my ideas on the use of community resources in providing low cost primary education. In order to prevent this paper from being too long, I will restrict myself to the use of community resources in remote rural areas.

My reason for choosing this area for presentation is that the people of remote rural areas have much less opportunity for education than those in urban areas. Usually, primary schools in remote areas have low enrolments, and are scattered far apart. These schools lack both good teachers and facilities which might enhance teaching. It would be very difficult to bring these small schools together. At the same time, it is the duty of educators to make available to everyone, right down to the last child, the opportunity for education. It is for this reason that small schools are built. If we consider the limited funds available for the support of such schools, it is clear that building small schools is very expensive.

Communication between such remote rural areas and urban centers is poor and inconvenient, for the rural areas are far from the urban centers, and often the only available method of travel is by foot. Teachers are not very willing to go out to these areas to teach. They prefer to stay in urban areas, as they have better opportunities to continue their own studies, as well as for job promotions.

With the above picture as back ground, I would like to make several recommendations.

1. Reduce the number of years of elementary education.

For example, in Thailand elementary education takes 7 years, 4 years for the first segment and 3 years for the second. This school-time might be reduced to 6 years, which would considerably reduce the amount of money spent on education. At present, pupils study 180 days a year. This

might be changed to 210 days a year, making it possible to complete the present curriculum in 6 years. But it would have to be demonstrated first that during days 181 to 210, the children were able to learn at as fast a rate as during the original 180 days. Or, another alternative might be to have the children study at school for only two years, so as to acquire the basic skills necessary to be able to continue studying on their own.

2. Curriculum development.

The curriculum should be developed so as to be useful to children in remote areas. At the same time, they must not be hampered from acquiring the knowledge which would enable them to go on to higher education. This new curriculum should include agriculture, health, nutrition, construction, population education, etc.

3. Resource Center.

The building of resource centers should be considered. A resource center would be used for in-service training for educational administrators, principals and teachers. It would also be a materials center to be used by educators for study and research which would help increase the efficiency of administrators, teachers, and learners. For example, a teacher would be able to go to the library for additional information on subjects not very clear to him, and use it in his teaching. He would also be assisted by a workshop, an audio-visual aids department, and document reproduction facilities. Such a center would serve to improve education, particularly curriculum development, text books, supplementary reading materials, programmed instruction materials, exercise books, tapes, and other teaching aids. It would also be a center of innovations, which could be tested out in a few schools, and if successful, introduced to all schools served by the center. This center would also have personnel with initiative, creativity, and a high degree of responsibility for innovation all of which would lead to the improvement of education. It would also have a team of teachers who would take turns going out to teach at remote area schools.

4. Mobile schools.

Education for the remote rural areas mentioned earlier is hampered by poor communications with urban areas. Automobiles and bicycles cannot be used because there are no roads or cart-tracks. Roads will not be built for a long time, since a developing country cannot afford the cost of construction and maintenance. The only way to bring education to these areas is to use the same method as the

villagers and traders do, that is to walk, or use caravans of horses, bullocks, or donkeys. Using these means of transportation, it is possible to take education into the villages through mobile schools, which would give the village children an equal opportunity for education. In the future, the caravans once used by traders may be the vehicle to carry young teachers and their teaching materials into these remote villages. On their reaching a village, temporary shelters would be put up, not for the usual movie or circus, but to be used as a temporary school where the children of the village could come to learn. These young teachers would stay in such a village for three months, before being replaced by a fresh team of teachers. In this way, young dedicated teachers could be enticed to give up their personal comforts, knowing that every time they went into a village, they would be there for only three months, and then would return to the Resource Center to prepare further lessons and teaching materials. In one year, each teacher would actually spend only six months teaching in remote villages. The mobile school would leave a village after the need for education in that village had been met, that is, once the children in the village had a good enough background to be able to continue their studies on their own. While in the village, the teachers would organize resource persons in the village to help with the education of the village children.

5. Village library.

Before moving the mobile school out of a village, the young teachers would build a village library. This would be built with the help of local carpenters, and would contain books useful to the villagers. Programmed instruction materials and tapes would be available for the children's use in furthering their education. Educated villagers would guide and encourage the children's study. After a suitable length of time, a teacher would go out from the Resource Center to test the children and see how they are progressing. This method of study could utilize whatever free time is available to the children. There would be none of the time limits of regular schools. The villagers would no longer be unhappy about sending their children to school from 8 a.m. to 3 p.m., when they might have work for them to do at home. Within a short time the children would have completed their primary education, and they would not easily forget what they had learned, as they would always be able to read books from the village library. Failure and dropping out would cease being features of the educational system.

In addition to the village library, it might be possible for the villagers

to buy small inexpensive transistor radios, which they could also use as a source of information. Informational programmes would be broadcasted at times when the villagers are not busy such as in the morning before going out to the fields, at noon during lunch time, and in the evening, after they have returned home, bathed, and eaten. If this were the case, the villagers would be more aware of the outside world, without having to leave their villages to go into the towns, which is often very frustrating experience for them.

Apart from the above methods, volunteer high-school and university students who have learned how to teach could regard their school holidays as an opportunity to use their training for the benefit of the children of rural villages.

Newspapers could be also published by the Resource Center and taken into the villages to propagate information useful to the villagers' occupations. These would also contain other information, making the villagers more aware of the outside world.

Before closing, I would like to remind you that our countries are agricultural countries. An over-dependance on modern technology and its products and processes can decrease rather than increase our happiness, and that of our children and grand-children. As long as we do not think about this possibility or think about it but do not act accordingly, whatever is inherently good in technology could easily be lost along with our happiness. It is time for us to begin to think, and think clearly, for it is the welfare of the people of our region that is at stake.

USE OF COMMUNITY RESOURCES IN PROVIDING NON-FORMAL EDUCATION

by Miss. CHONG HOO TUAN
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INTRODUCTION

I am aware that one of the main objectives of this Seminar is "to give greater definition to the delivery of mass primary education by focusing on the use of community resources, to replace or supplement those of the formal school system". It will seem, therefore that selecting non-formal education as the central theme of my discussion may be a deviation from this norm. I have my reasons for doing so and I believe that the principles adopted in the mobilisation of community resources in providing continuing education by the various statutory bodies in Singapore, such as the People's Association, the Adult Education Board and voluntary organisations may serve as useful guidelines for application to the former. On this, I shall elaborate further during the course of my discussion.

A HISTORICAL PERSPECTIVE

Formal Education

In Singapore, school education is extended to children from the age of 6 to 18, whilst tertiary education is also provided in the 5 institutions of higher learning namely, University of Singapore, Nanyang University, Ngee Ann Technical College, Institute of Education and Singapore Polytechnic. The formal school education system in Singapore has a history that dates back to the colonial days. If one goes back to the immediate pre-war and post-war years and views the education policy which existed then, one will notice that only a selected group of people received education of any kind. Large numbers of people, as in other parts of Asia, were illiterate. When Singapore attained self-government in 1959, immediate steps were taken to bridge the gap that existed at the time in terms of education of the general population. In the last few years, great changes have again taken place in our education policy in keeping with the economic needs of our nation. Besides providing at least ten years of education to every child from the age of six

stress is also placed on the teaching of Science and Mathematics, the development of bilingualism as well as the development of educational institutes and technical colleges.

THE DEVELOPMENT OF NON-FORMAL EDUCATION

With the successful launching of the family planning programmes which have curbed the rate of population growth to an appreciable degree, the numbers seeking formal school education will not increase tremendously in the foreseeable future. The immediate need is, rather, to review the qualitative requirements of our education system and to cater to the out-of-school group of youth and adults.

Bridging the gulf between formal and out-of-school education systems is important, for as stressed by the UNESCO World Conference on Adult Education in Tokyo, the functionality of adult education is very closely related to the lives of individuals and the needs of society. Life-long education is made much easier by mass media of communication such as TV, radio, and the press, as well as the teaching machines which have just been added to such traditional means as the library.

Our Government has as early as 1959 taken cognizance of these problems and adopted remedial measures to combat adult illiteracy as well as to promote functional literacy. It is with this in mind that the Adult Education Board, a statutory authority, was established in April 1960 with its objective set to eradicate adult illiteracy. With its success in combatting adult illiteracy through the conduct of literacy classes and as every child found his place in primary school and more continued in to secondary and vocational schools, the Board has more recently gone beyond its original aim in its emphasis on vocational, technical training, further education, workers education etc. There are no less than 40 agencies in Singapore, apart from the tools of mass media such as television, radio, and the press which are themselves great potentials as life-long education agencies, whose activities come under the broad category of non-formal education. These include Government Departments, statutory bodies such as the Adult Education Board, the Economic Development Board, the National Productivity Board, the People's Association and voluntary cultural and youth/religious organisations (Young Men Christian Association, Young Women Christian Association, etc.) and private concerns. They include :

GOVERNMENT

The National Library

Education Television Service

Training within Industry for Supervisors

The Police Academy

The Staff Training Institute and the Training Branches of several Government Ministries.

SEMI AND QUASI GOVERNMENTAL BODIES

The Institute of Education

The Adult Education Board

Nanyang and Singapore Universities

The National Productivity Board

The People's Association

The Economic Development Board

The National Youth Leadership Training Institute

The Light Industries Unit (part of Economic Development Board)

PROFESSIONAL BODIES

The Singapore Institute of Management

The Singapore Institute of Personnel Management

The Singapore Planning Research Group

VOLUNTARY BODIES

The National Trade Union Congress

The Young Men's Christian Association

The Young Women's Christian Association

The Chinese Young Men's Christian Association

The Ramakrishna Mission and Church Group

EDUCATIONAL RESOURCES

Through the use of the educational facilities and resources in these agencies, non-formal adult or continuing education is provided to youth and adults at very nominal costs. The term "educational resource" in this context may be taken to include national public funds, national private resources, which again may encompass monetary awards, and contributions in kind service. Such contributions may be made by teachers, the students or pupils, the community, as well as society at large. The term "Community" has also very many connotations. In the smaller geographical context, the "local community" denotes one in which

residents of the local area enjoy close association and cooperation, while the wide national community is one in which people are related to each other indirectly but have more or less common beliefs and sentiments. For the purpose of this discussion, "Community" will be taken to include both delineations.

RESOURCES AND AGENCIES FOR NON-FORMAL EDUCATION.

In Singapore, continuing education opportunities are acquired in the context of necessary cooperation between the government, and the masses. The achievement of this is facilitated by the compact nature of urban condition in Singapore. To bring about cooperation between Government and industry, a number of specialised agencies have been set up, like the Singapore Institute of Standards & Industrial Research/Light Industries Service, the Engineering and Industrial Development Authority, etc., and a significant aspect of the work of these agencies is actually continuing education. Whilst the Adult Education Board, the Extra-Mural Studies Department of the University of Singapore, Nanyang University and Ngee Ann Technical College having regular and frequent courses leading to the development of management skills, management courses are also conducted by such private bodies as the Singapore Institute of Management and the Singapore Institute of Personnel Management. The Economic Development Board, and the National Productivity Board have also made important contributions in the development of management talent.

Workers Education has also not been forgotten, as this is catered for by the National Productivity Board, the Adult Education Board and the National Youth Leadership Training Institute. The Ministries of Labour and Finance also provide in-service training, refresher or special courses for civil servants. The Police Academy, besides providing all the basic and advanced training to equip police personnel for their specific duties, also emphasises language training to fit its officers for their role in a multilingual society. As reiterated, earlier besides the face-to-face methods of communicating with people, the mass media have also been extensively exploited to bring home to the people the economic, social and political issues facing the nation. The press, radio and television are important educational tools which have great potential to be developed and the Adult Education Board and Ministry of Education have been prominent in this area. The Adult Education Board has its Radio and Television Talks and courses and Public Forums. The Educational Television Service and CEPTA—TV of the Education Ministry have also provided useful services to the young and old.

PEOPLE'S ASSOCIATION AS AN INSTRUMENT FOR NON-FORMAL EDUCATION

The People's Association can be said to be the major social education agency

in Singapore. It was set up in 1960 to organise and promote group participation in social, cultural, educational and athletic activities for the people of Singapore so that a multi-racial community could transcend sectional loyalties and reach for a national identity. To achieve this aim, the full-participation of the people is encouraged through the formation of Management Committees, Women's Women's Sub-Committees, and Youth Sub-Committees. Today there are 182 Management Committees with 2035 members, 53 Women's Sub-Committees with 523 committee member, and 63 Youth Sub-Committees with 697 committee members, and another 4694 ordinary members serving in the youth groups. Members of these committees come from all walks of life and are local leaders who enjoy high esteem among the residents. Through the assumption of responsibilities by the members of Management Committees, Women's Sub-Committees and Youth Sub-Committees, these committees provide the key to better local response and participation in the various governments campaigns and other services provided in the community centres. The moral support of these unselfish community workers is a key factor in the success of numerous community projects and national campaigns. Together with the Adult Education Board, the Extra Mural Studies Department of the University, and the National Trade Union Congress, as well as other religious and cultural organisations, the People's Association has strived for the attainment and development of social cohesion and national consciousness amongst the multi-racial and multi-cultural people. In addition, the People's Association also establishes close liaison with the 582 Citizens Consultative Committees formed under the wing of the Prime Minister's Office with a total membership of 1487 and it takes a hand in activating them for participation in community service.

RECREATIONAL ACTIVITIES

Sports activities are most common in community centres and well patronised by youths drawn from the uneducated and those with little education to the centres through games, so that they can slowly be integrated into normal social life. In our programme of providing adult education to the masses, the People's Association also attempts to orientate the minds of the public towards shaping a national culture and breaking interethnic prejudices. With this aim in mind, cultural activities are organized in the community centres. The People's Association Cultural Group also brings cultural programmes to the door-steps of the ordinary People. Opportunities are also accorded to local artists to display their talents by using community centres for art exhibitions. A wide range of vocational activities and hobbies are also offered.

As community centres play a major role in the various national campaigns launched by the government, it is in the community centres that the policies of the government are vividly and adequately explained to the people by Members of

Parliament, Government officials, community leaders and staff of the Association. These campaigns are not only informative but are also essentially educational, in that they help to inculcate in the people a true sense of community spirit and civic consciousness.

COMMUNITY EXTENSION SERVICES

Notwithstanding comparatively good resources and relatively good local participation, the situation is by no means perfect. There is a need for constant self-reviewing and plenty of room for improvement, especially in terms of the facilities of our community centres. In order to realise the full potentiality of the Associations, the need was felt for closer liaison and coordination between the Association and its corporation members. Steps have already been taken to pool the resources of the People's Association and the National Theatre Trust in the promotion of cultural activities. There has been much, a closer liaison between the People's Association and the Adult Education Board in the organisation of joint vocational classes at the community centres.

At present the Association is organising, as part of the Community Extension Services, a series of talks by various local and foreign personalities and experts on a wide spectrum of subjects relevant to the community.

CONCLUSION

The renovation and reform of education, its financing and sustenance cannot be carried out without the cooperation and coordinating efforts of the government and the community. This is manifested in Singapore by the successful contributions of the innumerable non-formal education agencies towards the provision of life-long education. It is hoped that through time mass formal school education will be promoted at reasonably low cost and sustained through more community participation.

November 1973

SOME OPINIONS CONCERNING THE USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION

by Mr. PHAN CONG MINH
Mr. CAO MINH KHAI
VIETNAM

WHAT IS A COMMUNITY RESOURCE ?

Until now, people recognize three main community resources : human, financial and material resources.

Human Resources. People who live in a community must contribute their share to make the community better. From the old days to the present time, we have entrusted the task of teaching to the teachers appointed by the government or paid by the private educational associations. Besides the teachers, nobody pays attention to the teaching of children. After sending their children to school, parents no longer assume primary responsibility for the education of their children.

According to the new concept of education, everybody who lives in the same community must be responsible for the education of their children. People in the community other than teachers such as parents, educated villagers, skilled farmers, carpenters, masons, fishers, military men religious bodies, boy scouts, 4-H groups, can also be involved in education. We can only have a cheaper education at the elementary level, if there are more people who think of how to improve their community.

Financial Resources. Not only do we depend on the national budget, but we also need the contribution of people who live in the community in building new schools, equipping furniture, supplying textbooks and instructional aids. Forest products, farm products, sea products, depending on where the community is, are the main resource to build funds for the community. Moreover, we can organize exhibitions, plays, drama, cinemas, or centers of recreation to create more money for the community. Besides, parent associations can also contribute their money according to their income to the building of more schools.

Material Resources. All the buildings, churches, communal houses, temples, or anything that has a roof must be used as classrooms, as cultural centers and student unions, or as activity centers for the community.

Instructional materials, can be realized by

1. **Collecting** : We collect all kinds of cereals, sea products, spices, maps, insects and pictures of great men in the world.
2. **Creating** : Local materials can be used to make relief maps, globes, daily-used materials such as knives, scissors, bowls, hammers, chisels. Puppets, one of the most interesting materials for teaching youngsters, can be made with straw, cotton, etc.

In short, all of the community resources must be formed by the contribution of the community. School and community must be clever in using these community resources to expand school buildings and to improve the methods of teaching so as to meet the practical needs of the community.

- Why use community resources ?
- What key problems can be solved by the use of these resources ?

The use of community resources may help solve many key educational problems which a developing nation like Viet Nam that has been through a long and devastating war has to face. It is obvious to say that without using community resources, we cannot deal with the demand of more teachers, more classrooms, and more textbooks for the everincreasing school population.

Using community resources will have the following advantages :

- In the spiritual aspect, people will realize their responsibilities and the necessity of education for their children, for themselves, and for all members in the community. Being conscious of that, they will willingly contribute their manpower, finance, and materials to the development of the community. Since they are conscious of their contribution to the community--and once the community property is rich--the contributors recognize their duty in the safeguarding of their own work and property.

- Using community resources, education can be improved, developed and fitted to the needs of each community.

- The use of community resources is in line with the policy of decentralization of education in Viet Nam. Since the time when the government carried out this policy, many key problems have been solved. For example, with the contribution and cooperation of the community, many more schools have been built to meet the needs of more classrooms. That solution puts to end the three shift-classes. With this rate of development, we can soon liberate the two shift classes and in the future the children may attend full-time classes twice a day.

In doing so, the community shares the load of national budget which is low because of its use for national defense purposes.

— The government will receive no more requests from parents asking for building more school because they have already felt that they are responsible for their own community. In this aspect, the government has gained a notable spiritual advantage. Parents and people in the community have really made their contribution to the common national plan with the spirit of a "responsible man" because they are directly concerned with the education of their children, in the education. They will, therefore, play a more important role system after having acquired a better knowledge of education and of their own community problems.

In short, if we know how to manage all the community resources in providing an efficient education fitted to the needs of the community, the government will spend less national funds.

But besides the advantages mentioned above, there are disadvantages in the use of community resources, since some communities are rich and others are poor. In the rich communities where there are various resource people who gain more income can make their contributions more easily. In the less rich communities where resources are poor and people barely earn a living, they cannot contribute or participate in the community activities. Thus, we cannot offer equal opportunity for all in education and in self-instruction. In addition, it is difficult to coordinate all human resources in different circumstances and put into a total education system to deal with the identified needs of the community.

— How can community resources be utilized ?

No one can deny that community resources have contributed to the development of education. But the important question is how can community resources be utilized in order to make mass education cheaper and more effective.

— First, self-engagement is necessary. Those who are volunteers and those who are concerned with the education of their children can spend their time to help regulate or participate in the community activities. But mere voluntary participation is not enough. The second requirement which is no less important is one's training or skills. We may ask whether those active voluntary members can meet the requirement to accomplish the assigned work perfectly ? The question of « the right person for right job » is also important.

— Press and mass media should also play a role in marshalling the cooperation and contribution of the community members to education. They should be used as a means to honor the citation of those who merit reward in education, as we do in the military domain.

— The various agencies for educational research should coordinate and spend more time to conduct studies on :

- The actual needs of each community.
- The resources that are available in the community.
- The existing resources that are not operative as learning resources.
- The improvement of the curriculum to meet the needs of the community.
- The training of more school teachers or workers to utilize the local resources in producing inexpensive teaching aids.
- The kinds of incentives that are adaptable to our situation to motivate the community members to participate and contribute to education.

Although the above mentioned opinions are simple, they nevertheless reflect the real needs of our country in providing low cost primary education.

STUDENT AS TEACHING RESOURCES

by Dr. DAVID J. KLAUS

**THIS PAPER WAS BASED ON
A PROJECT RECENTLY COMPLETED
FOR THE U.S. AGENCY FOR
INTERNATIONAL DEVELOPMENT.
THE VIEWS PRESENTED HERE
WERE BASED ON THAT REPORT**

Fundamental education consistently has been a high-priority sector in the programs of lesser developed countries. Yet, the magnitude of the deficit and the equally pressing need to invest talent and resources in other sectors have sorely limited progress toward reasonable educational opportunities for all those who would profit from it. Growth in educational capacity in most developing countries has been enormous, but concurrent increases in population in the schoolage range have substantially nullified many of these advances. While there is ample reason to expect that the problem will be solved over the long term by continued improvements, the immediate needs of literally millions of potential pupils are not now being met. Given that the economic growth needed to expand educational opportunities itself hinges on more universal education, the only practical approaches to leap-frogging existing deficiencies are those based on new alternatives to traditional educational methods.

The use of non-professional teachers represents one avenue of attack on the problem. Interestingly, the non-professional teacher has always had a significant, but rarely formalized, role in the educational process. Until the rather recent development of « public » schools, most fundamental learning took place under the auspices of untrained teachers, often parents or siblings, and sometimes religious instructors or apprentice masters. Even more remarkably, the first large-scale public schools created in England and America early in the nineteenth century achieved practical success only because they relegated much of the teaching responsibility to non-professionals through « monitorial » systems of instruction: In the most famous version of this approach to mass education, the Lancasterian system, public education was made economically feasible in cities such as New York and Philadelphia by assigning several hundred pupils to each room. A single teacher presented the lesson to designated

pupils, or « monitors, » who then in turn drilled small groups of ten or so students. This system, similar in many respects to traditional instructional methods used for centuries by the Hindus and Jesuits, among others, proved extremely successful at its time. It was not replaced until a steady supply of permanent teachers became available after the establishment of normal schools in the 1840's.

This survey explored the possible roles and sources of non-professionals as resources for needed educational services where an adequate supply of trained teachers does not exist. The information contained in it is based on a survey of what currently is being done in the United States to utilize non-professionals in teaching roles, the consolidation of various features of these programs into potentially appropriate core system, and the judgements of the suitability of these core systems by experienced, research-oriented educators from eight developing countries. Four separate models, or groups of models, were identified which make use of students as teaching resources. These are not the only models which could be devised, but they do represent modal points in the spectrum of conceivable programs that might be of value to underdeveloped nations. These four models are :

- I. **In-Class Cooperation**, a model which pairs or groups children within the same class to permit increased opportunities for students to practice newly learned skills. By working together, they can get more practice than otherwise would be possible, particularly in very large classes. The approach also potentially frees some of the time a teacher now spends in conducting recitations or supervising exercises for other more important activities, such as giving individualized help to learners with difficulties.
- II. **Cross-Grade Tutoring**, a model which utilizes older, more advanced students to give individual tutorial help on a one-to-one basis to younger students who needed extra assistance. To promote the possibility of gains for both the tutors and the tutees, the program should stress voluntary participation, tutor training, and the preparation of only a limited supply of special material.
- III. **Monitorial Instruction**, a model which use students, preferably brighter students from the same class, to carry out some of a teacher's normal instructional functions. This approach would be particularly useful where the class was made up of separate grades, ability streams or convenience groups. It would permit the teacher to spend a greater proportion of her

time on those activities which only she, as a professional, had the skill and knowledge to accomplish successfully.

IV. Ancillary Teaching, a model which depends on students enrolled in school to assist and instruct other children where no schools are available, where there are children who cannot attend school, where children in school need extra help, or where classes for preschoolers are desired. This kind of program would stress instruction aimed toward specific skills rather than the comprehensive education of the learners.

In each of these four models there are opportunities to produce demonstrable academic gain for the helper, for the learner, or both. Each model also affords the opportunity to create lasting patterns of social relationships that could lead to positive improvements in community and cultural interactions. None of the models entail major revisions in existing educational systems, extensive material development efforts or substantial operating costs. For these reasons, these four models were selected as the ones to be presented to educators in the developing countries for their consideration and comments.

The assessment of the degree to which these models fit the needs and circumstances of this sample of developing countries demonstrated that no one approach to using students as teaching resources clearly is superior to all others, and that no one model can be regarded as overwhelmingly more appropriate as a potential means of alleviating existing educational deficiencies in the developing countries. Nevertheless, there are a number of areas in which a consensus does exist, and the identification of these commonalities will permit narrowing further attention to those opportunities and constraints which are likely to have a significant effect on any peer tutoring or teaching program in an underdeveloped nation.

1. Acceptability of the Models.

To begin with, the various programs reviewed here in the United States largely were designed to cope with problems, such as the failure of traditional educational practices to overcome the disadvantages of the urban ghettos, which are not necessarily consistent with the difficulties faced by most developing countries. Yet, some use of students as teaching resources in an informal practice in almost every country referred to in the survey. The adoption of more systematic programs may be limited in some countries by various constraints, such as the unavailability of upper primary grade tutors during the period preceding their secondary school entrance examinations, the view that students are not reliable sources of information,

or the lack of space in which to add tutors to most classrooms. Nevertheless, none of these problems seemed so severe as to preclude further consideration of any of the models that were presented.

Probably any of the four models described earlier in this report could be made to work in any of the countries surveyed. And, since these four models were chosen to represent the range of models that might have utility in the developing countries, it is clear that almost any model which did not depend on radical changes in the educational system or require the preparation of vast amounts of supporting materials could be implemented.

2. Variability in Requirements

The countries surveyed differed considerably in the problems which appeared to be interfering with improvements in their programs of primary education, in their choice of areas where they would like to see new resources applied, and in their basic educational philosophies with respect to what constitutes effective teaching. For example, only one third of the elementary school teachers in Vietnam can be viewed as minimally qualified, while there is a yearly surplus of thousands of teachers with university degrees in the Philippines. Some countries such as Korea, have high expectations that children will continue on in school beyond the primary grades while others, such as Indonesia feel no critical need to have most children learn more than can be offered in a traditional primary program. The teaching practices in some countries, such as Ghana, focus almost exclusively on the brighter children while elsewhere, as in Thailand, it is the weaker children who are expected to receive the most attention. There is considerable variability among the developing countries in their needs and aims and, as a result, the same program would not be suitable everywhere.

No one model for using students as teaching resources emerged as clearly the most suitable for a majority of the countries participating in the survey. Each of the four models was selected by the informants from at least one of the eight countries as the most promising in their view, and several felt that two or more of the models could be utilized. On the other hand, even when the same general model was chosen, it was clear that the resulting program would likely vary from country to country in many important details.

3. Program Emphasis

Although the findings from studies done in the United States suggest that gains for the tutors might be substantially greater than those expected for the learners, the educators interviewed in the developing countries almost uniformly were more concerned with the probable impact of a program on those receiving assistance than on those giving it. Oversized classes, underqualified teachers, inappropriate materials, shared teachers and shortened school days due to shift arrangements all are recognized as factors which limit learning opportunities within the classroom. Improvements in the performance of the tutors, both academic and social, would be desirable, but a program would be sustainable only if it produced tangible benefits for those children who were being taught by other students. The impact need not be direct, and could result from programs which permitted the better use of the professional teacher's time, but it would have to be in the form of improved achievement for the learners.

In light of their needs and preferences, the developing countries are far more likely to have an interest in programs which aim toward gains for the learners than those which would result in gains for the tutors. In most countries included in the survey, in fact, there would be an evident distrust of the use of students as teaching resources by the teachers, the parents and even the students receiving the instruction which would have to be overcome. Academic gains for the tutors, and social gains for either the helpers or those being helped, tend to be regarded as secondary issues.

4 Degree of Structure.

In spite of this emphasis on how much more would be learned by those receiving the instruction, use of the highly structured systems created in the United States for just this purpose does not seem to be suitable or acceptable for many of the developing countries, at least at the present time. Even where underqualified teachers are the rule, programs which depend on the tutorial process as the primary source of instruction for all children represent too great a divergence from present practices to afford much hope of acceptance. Regardless of the type of model felt to have the most promise, there is a distinct preference for programs which are fundamentally informal, teacher supervised, and supplementary to traditional classroom teaching. This

concern did not relate to the need to develop and make available a supply of whatever new materials might be required but, instead, to the downgrading of the role and responsibilities of the professional classroom teacher. Students tutoring students is seen as a teaching technique, not the teaching technique.

The direct transfer of existing, highly structured programs which make use of students as teaching resources as the primary vehicle for the learning of all children is not likely to be accepted.

Programs which provide the classroom teacher with the option of determining who will receive help, who will give it, and what kinds of help will be given are apt to be much more tolerable. Only where educational opportunities were completely lacking would programs that did not depend on a teacher be welcomed.

5. Problems to be Overcome.

In general, physical and financial constraints which cannot be overcome by the use of students as teaching resources will prevent this approach from radically expanding the quantitatively limited opportunities for education that now exist in most developing countries. Programs which use students to teach other students will not result in adding children to most classrooms, increasing the number of years of education typically received, or materially lengthening the school day. Nor will these programs diminish the effects of more fundamental problems such as the lack of relevance in what is taught, the adequacy and availability of curriculum materials, and the attitudes of many parents toward education of any kind. On the other hand, the use of students as instructional resources represents a significant opportunity to realize more effective results from the time, money and effort already being invested in education by increasing learner practice, by heightening individualization, by expanding remediation and by making better use of the skills, knowledge and energies of available teachers. Considering what now is being accomplished by the schools in most developing countries, these contributions alone are more than worthwhile.

The adoption of a system utilizing students as teaching resources will not radically change the numbers of children who are exposed to education or the number of years they can attend school. On the other hand, these system can expand the amount of education obtained by

making learning faster, easier and more reliable than it now is. As a result, much more will be accomplished by the better use of already existing facilities and personnel.

6. Benefits to be Achieved.

Just as simply expanding the numbers of children in a classroom cannot be considered an improvement in education, merely assigning students to instructional roles is not likely to benefit anyone's learning. A well designed program has to do more than replace unqualified paid teachers with unqualified teacher surrogates. As the products of a system which uses students to help teach, a number of gains can be expected. First, the children who receive assistance should average higher achievement as a function of their participation. Second, the frequency of non-promotions should be reduced. Third, the impact of individual differences in age, back-ground and aptitudes should be lessened.— Fourth, students given the opportunity to teach should gain in their ability to use the knowledge they have and should expand it by helping others learn. Fifth, the interest of all participants in learning should be increased by its having been made easier, more exciting and more responsive to their particular needs. And sixth, the experience of working together and helping each other should produce lasting effects on cooperative efforts and social relationships.

The benefits which could be sought through programs based on the use of students as teaching resources include improvements in learner achievement, grade repetition rates, within class differences, tutor attainment, interest in education, and social attitudes. Not all of these benefits necessarily would be accomplished within a single program, but the opportunity to produce gains in each of these directions could be created by the use of any the models.

7. Applications of In-Class Cooperation.

The informants from several countries felt that some version of the in-class cooperation model would be useful in their countries. In Indonesia, for example, many students already work together on homework assignments after school. By giving them training in how to study together, and by giving materials to use for this purpose which were better than the texts they now have, greater benefits could be realized from these informal, after school activities. For the Philippines, it was suggested that brighter children could help their classmates if this was done under the direct super-

vision of the teacher and with materials the teacher would provide for this purpose. Students who helped others could be rewarded with ribbons or a book. The in-class cooperation model would not be acceptable in some of the other countries, however. In Ghana, for instance, it was felt that such a program would involve very substantial changes in the way children are taught, and that teachers would be unwilling to try it. In Thailand, it was expected the teachers may be incapable of managing the system, especially for large classes. And in Nigeria, there would be the criticism that the better students always were giving help while the poorer students always were receiving it.

In-class cooperation, even where regarded as potentially beneficial, did not seem to be either a good use of class time or an easily manageable program. In no country was the need for more practice than normally occurs in a teacher-led classroom felt to be pressing enough to risk the play-ground-like confusion that could result. Having students work cooperatively within the classroom does not fit easily into present classroom routines, and substantial revisions in these routines would be needed to make extensive use of an in-class cooperation model.

8. Applications of Cross-Grade Tutoring.

Programs based on cross-grade tutoring seem to be preferred where the need for greater opportunities for remediation are required. The Thais feel this could be done outside of regular school hours, so the tutors would not miss any of their own classes. They suggested having the teacher choose tutors from among the very best students that she taught during the previous year, and letting the weaker children structure the sessions by requesting the help they want. In Nigeria, the sessions could be held during normal school hours because the tutor could miss unimportant classes or those he already was advanced in. In Korea, however, it also was felt the program would work best outside of regular class hours. In all three countries, informal tutoring was suggested in contrast to having the tutor «teach». Informants from Ghana, Sierra Leone, Viet Nam and the Philippines felt older students would resent being recruited as tutors because it would take time away from their own studies and their preparation for exams.

Cross-grade tutoring is desirable, but mainly for remedial assistance and no encouragement was received for including this kind of instruction as part of the regular school program in order to increase individualization. Tutoring was felt to be valuable where traditional

group methods had failed, but this model was not assumed to have sufficient potential for all students to devote class time to it as a substitute for lectures, recitations or seatwork.

9. Applications of Monitorial Instruction.

The use of monitorial instruction already seems widespread in many of the developing countries where grade, ability or convenience groupings exist in the classrooms. This is the case in Sierra Leone, for example, and in Indonesia. Educators from both of these countries felt it would best if the monitor focused mainly on supervising practice exercises and being an aide to the regular classroom teacher. For Ghana, it was suggested that children could take turns preparing lessons for their classmates so they all could derive benefits from this activity. However, the lesson would have to be presented under the teacher's supervision so that the other pupils and their parents would be sure of the lesson's accuracy. Concern over the likely capability of the monitor also was voiced with respect to installing such a program in VietNam, Thailand, and the Philippines. The possibility that a monitor might be better at instructing other children than their own classroom teacher generally was rejected.

Monitorial instruction is considered to be a practical and useful means of assisting teachers in grouped classrooms, but the monitor would be expected to make the teacher's tasks easier rather than the students' learning better. He would not be assumed to have sufficient skill to take a more active role in the teaching process, nor would it be likely that he would be given any freedom in determining how the lesson was to be taught.

10. Applications of Ancillary Teaching.

Almost all of the informants interviewed contended that sufficient spaces were available to accommodate all of the primary aged children who wished to attend at least the first few years of school. Distance to the nearest primary school, poverty, and the need to help out at home were conditions which presumably affected some children, but never a very significant percentage of them. As a result, and because of other, existing programs which dealt with these problems, it was reported that there was no real need for ancillary teaching in Ghana, Sierra Leone, Nigeria, Thailand, Indonesia, or Korea. Only in Viet Nam was it felt that there were enough

children who were not enrolled in school for reasons other than preference or interest to make a program of using students to teach other children in the evenings worthwhile. Whether the need for easier access to school is indeed a problem that no longer exists in most countries, or whether educators are reluctant to attribute non-attendance to other factors than parental disinterest, it seems clear that an ancillary teaching program would not be given enthusiastic consideration.

Ancillary teaching is appropriate only where it is recognized that many children are not attending school but would welcome the opportunity to learn, even from a volunteering primary school student. Despite enrollment rates as low as 60 percent in the lower primary grades among the countries surveyed, it generally is not felt necessary to create additional instructional opportunities outside of their regular school systems.

11. Planning a Program.

The substantial literature reporting projects conducted in the United States on the use of students as teaching resources rarely is concerned with the same goals and circumstances that are likely to be encountered in the developing countries. On the other hand, this literature often does identify what is feasible, and it does contain a substantial number of suggestions for enhancing the likely success of any program. For example, most practitioners agree that an age difference of three years between a tutor and tutee in a cross-grade program is necessary if the older child is to serve as a model for the younger one. Training for students who take teaching roles, particularly to the extent it contains role-play exercises, seems to be an important requisite and one which cannot be left exclusively to the classroom teacher. Programs can fail, as did the early projects in Michigan, Connecticut and New Jersey on the use of aides in the classroom, because of misconceptions on the part of teachers, parents, students, administrators or the participants themselves. An unstable curriculum can diminish the potential contribution of an older student who is not familiar with the new content or methods. The use of contingency management techniques may convert an otherwise mediocre program into one that is eminently successful.

Programs developed in the United States, while often addressed to different problems and conditions than those which should be the focus of an overseas project, nevertheless represent a substantial

source of useful experience and ideas. It would be unwise to plan a project to be implemented in the developing countries which represented a radical departure from approaches which are known to be feasible and which have achieved at least some operational success in this country.

12. Implementing a Program

The preponderance of under qualified teachers, inadequate local supervision, and fixed community expectations in many developing countries will have to be taken into account when a program is installed. Resistance and inflexibility toward educational change may be more pronounced there than it is where there is greater recognition of existing deficiencies, as in many disadvantaged neighborhoods. The attitudes of everyone concerned will have to be taken into account, as will the space, materials and supplies that would have to be available for the program to operate. In many of the countries surveyed, children sit three or four to a desk, share texts and pencils, and find it difficult to hear because of noise from an adjacent classroom. Printing, audiovisual services and transportation within rural areas may be virtually non-existent. Concepts such as summer programs, in-service teacher institutes or parental participation rarely can be considered practical. Systematic data collection may entail the services of far more sophisticated individuals than are likely to be available, particularly in rural areas. The continuous participation of locally based collaborators would be needed to anticipate these problems and to help devise solutions which are within that country's ability to install and sustain.

Because of the many kinds of specific problems which may have to be overcome, the participation of a local institution probably will be essential to the successful implementation of a program using students as teaching resources. At least one organization exists within each of the countries surveyed which has the capacity to assist in planning, installing, evaluating and disseminating the findings of an experimental program, and the cooperation of such an institution should be an integral component of project plans.

13. Maintaining a Program

Educational advances are occurring rapidly in many developing countries, as in Ghana where the percentage of unqualified teachers in the primary schools is expected to be reduced from about 60 percent in the 1967-68

school year to zero by the end of the 1975 — 76 school year. The construction of modern school buildings in Viet Nam, the likely establishment of a regional textbook printing plant in Sierra Leone and the planned introduction of instructional television in Korea suggest that projects which are conceptualized only as stopgap remedies may be short lived. A program which emphasizes temporary gains rather than more permanent improvements is not likely to result in the very fundamental gains that have been achieved only after a system has become institutionalized through several years of incremental operation. Continuous monitoring of a program will be required for an extended period, not only to prevent decay once the freshness has worn off, but to help the program accommodate to new conditions brought about by subsequent reforms.

Concern should be given to the maintenance of the program and the many potential advantages of using students as teaching resources which go far beyond the immediate problem of remedying current deficiencies in the educational system of developing countries.

A failure to plan toward these more desirable benefits may inhibit their realization and leave the programme unable to cope with any future change that may affect its operation. The goals of the approach should not be lost sight of because of concern over the means.

14. Concomitant Innovations

The use of students as teaching resources permits consideration of a fairly sizable number of educational innovations which would not be necessary to its success, but which would be made feasible by a program of peer tutoring. In a traditional classroom, teachers often are limited by the size of the class in terms of what kinds of techniques they can employ. They cannot use other techniques which are only possible or practical when instruction is individualized or personalized to the extent it can be when students are used to teach students. The use of contingency management, for instance, depends on fairly continuous opportunities to observe and reward the work of individual children, often according to a prescription designed separately for each child. Continuous progress schemes such as those proposed for the Philippines easily can get out of hand without adequate monitoring. Some materials, like Montessori kits or Cuisenaire rods are used properly only when the students are encouraged to use their own initiative and work independently. On the other

hand, techniques such as the inquiry teaching method depend upon group participation and management by a skilled teacher for their success.

It is important that a program of peer teaching both take advantage of educational innovations made possible by its introduction and, at the same time, not preclude the continued use of methods and materials which have been successful in that country's schools.

An investigation of the use of students as teaching resources should not be limited to traditional educational materials and methods when one of the benefits of this approach is that it permits the introduction of otherwise unworkable ideas.

15. Appraising Cost-Effectiveness.

Many studies which have been conducted to test the efficacy of students as teaching resources, both here and overseas, have noted the low unit cost of using volunteering students in teaching roles. Establishing the appropriateness of even these small costs, however, must include an assessment of the benefits they resulted in, and the probable cost of achieving similar benefits through alternate programs. These are difficult dimensions to measure, but nevertheless are important aspects to consider in evaluating a program's success. Furthermore, gains in achievement and social confidence are not the only outcomes of a peer teaching project that deserve attention. Any new system which permitted the assignment of more children to each classroom, the more rapid progression of students through the school system, the widespread use of less qualified teachers, a decrease in wastage due to fewer non-promotions and dropouts, the more efficient use of school buildings and other educational investments, or the creation of new educational opportunities where none previously existed are benefits which have a distinct value in underdeveloped countries even if achievement remains constant. On the other hand, the results derived from a program necessarily are relative to other uses of the same resources. Almost any of the goals already cited might be more economically achieved through more extensive in-service training, new classroom materials, better supervision at the local level or other means. **The need to assess the cost-effectiveness of any peer teaching program, particularly in relation to the equivalent allocation of resources for the implementation of alternative approaches, must be recognized. The direct costs of implementing and maintaining a program using students as teaching resources are not as significant as the**

relationship of these costs to the benefits derived in terms of established national priorities and competing options for improving educational outcomes.

16. Maximizing Probable Impact.

The design of a demonstration project on the use of students as instructional resources in the developing countries must focus on achieving results which represent a major impact and which go beyond the attainment of simple statistical significance. The problems which need to be overcome are too massive to be approached with a study that, even if fully successful, would not be viewed as more than one small contribution to educational technology. The credibility of peer teaching as an innovative instructional tool will depend upon outcomes that are both replicable and highly visible. In all likelihood, this means some risk will be incurred in carrying out a project which is presented as one with considerable promise but one recognized to have reservations that the expected benefits may not be fully attained. The risk of either a fully successful outcome which is not of an impressive magnitude or a failure to attain a hoped for breakthrough can be minimized by realistic levels of support and longevity for the pilot program.

The probable impact of a project which introduces the use of students as instructional resources can be maximized by selecting a program that holds forth the promise of making a truly meaningful contribution, and by making an investment in it which is commensurate to the probable payoff. A moderately risky program is preferable to one which aims at only modest results since either, if successful, could be replicated elsewhere at about the same cost.

WHAT WE HAVE LEARNED

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INTRODUCTION

The "we" in the title above is INNOTECH --its staff and training programme participants. The staff is particularly grateful for the many thoughtful contributions which can, in the near future, have a real impact on the development of field projects for the delivery of mass primary education. Numerous participants also have expressed their pleasure in having been a part of this Regional Seminar.

This portion of the Seminar report, as will be seen shortly, is neither an organized nor a smooth-flowing nor a comprehensive exposition of what we have learned; it is the bits and pieces of concepts, thoughts and quotes that particularly struck us as being most relevant to INNOTECH. Much that appears here is out of context, but we hope that we have been able to preserve the essence of the many inputs received during the week.

GOODBYE TO «NO MORE SCHOOLS. HELLO TO ?

It seems that a sore toe will inevitably be stepped on time and again. INNOTECH's sore toe throughout this Seminar has been in a name: "No More Schools." This label was first used in April of this year to describe (and consciously draw attention to) a concept to be used as a starting point in the Center's long range field research programme on the delivery of mass primary education. The concept essentially is aimed at reducing the greatest cost element in primary education, teacher costs, by increasing substantially the number of children who can receive an education under the guidance of a single teacher. Teachers become "managers" of the self-directed self-instruction of children and are assisted in this task by parents, community members and other students. No element in the concept is either new, untried or radical; and the combination of these elements into an/experimental system seemed worthy of field tryouts --however much the concept may eventually evolve and change before becoming a workable system. What was radical, and perhaps threatening, was the "No More Schools" label. It sounded a bit like "de-schooling," and it seemed to imply "low quality," neither of which are attributes of the concept itself.

Rather than perpetuate the above misunderstanding, the INNOTECH Director requested Seminar participants to suggest alternative titles for the delivery system concept with the intent of answering the question: Goodbye to "No More Schools, Hello to "?" Although the staff has not yet selected a new title, we are appending below the suggestion of Seminar participants--another illustration of the creative and innovative spirit of this Seminar.

1. Non-graded school
2. INNOTECH Mass Primary Educati
- 3 Progressive Education
4. Community Education
5. Cost-effective Primary Education
6. Asia-oriented Education
7. Community-based Education
8. Realistic Education
9. Modified Schools
10. Modified Community Schools
11. Real-life Schools
12. Non-formal Schools
13. Open-air Classrooms
14. Community-centered Education
15. School at Home
16. Schools Through Community Participation
17. Community Learning Center
18. Wall-less Schools
19. The INNOTECH Primary Education Experiment
20. Learning Opportunities for all and by all : an INNOTECH experiment
21. INNOTECH Self- directed Learning
22. Teacher-managed Self-education
23. The «New Direction» Education
24. Universal Primary Education Project
25. SEA/SEA = Southeast Asian Self-Educaton Approach
26. CCC = Cooperative Community Concept
27. SEA/NAPE = SEA New Approach to Primary Education
28. Project IMPACT = Instructional Management by Parents, Community and Teachers
29. No Classroom Schools

30. No More Classroom Schools
31. Project CAPE = Community Approach to Primary Education
32. Project CORE = Community Organized Relevant Education
33. Schools Break Down Walls
34. Community-based Education
35. The Community is the School
36. Education outside the Schools
37. Community-based Auto-education
38. Off-school Education
39. Non-conventional Mass Education
40. Project SWS = Schooling Without Schools
41. The NAGA-SOLO Project for Primary Education

FROM THE PRESENTATIONS

Thirteen papers precede this final portion of the report. They stand on their own, but the staff was so impressed with some of the ideas that we felt it necessary to bring them together here as direct quotes. They are here out of context (except as part of the larger report) and there is no attempt to be comprehensive, but in many cases they are so to the point that we beg the authors' indulgence.

Dr. Robert Jacobs

Southern Illinois University :

«... When the essential information is brought together (population projections, rising costs, available resources for investment in education) it takes little numeracy skill to determine that it is no longer possible... to close the gap between the education haves and have-nots by following the traditional paths of the formal education system. Very few of the developing countries can ever afford the massive cost of building enough classrooms, training and hiring enough teachers, and printing and distributing enough textbooks to make possible the extension of the formal school system as it is today to **all** youngsters of school age ».

«... It will help if we can shift our focus from the teacher to the learner and from the process of teaching to the process of learning. Being concerned with how well a lesson is taught all too often obscures the more significant question-- what has been learned ? »

«... It we recognize the currently functioning of existing community resources (and being part of the child's total learning environment), the creativity in the job we are undertaking may become that of devising ways to refine, redirect, undergird, coordinate, and otherwise shape into a meaningful, goal-directed, total learning system, the resources in the community which are already generating learning ».

Dr. Liceria Brillantes-Soriano

Director of Public Schools, Philippines :

«... Current views of youngsters and their elders of schooling, the observations of erudite pedagogical critics of what the schools have failed to accomplish, an analytical look at the realities of public education, and an understanding of the learning process suggest that approaches to the problem must provide for community-based learning, harnessing all appropriate resources available in a community ».

«... Most of the learnings that both the young and adults consider important for survival in a rapidly changing world have been acquired through influences outside the school, i.e., forces in the community. In recent years the community has emerged the most vibrant educative laboratory within the reach of every learner. It is the most promising medium for spanning the gap between what the learner knows and what he does. Optimum use of its resources offers a potent approach to cutting down costs for primary education in developing countries, where funds for education are scarce, and to infusing it with relevance. »

«Full exploitation of community resources in education requires the deinstitutionalization of the school to some extent. The process of partially de—establishing it starts from the «breaking down of its walls» as the people in the community are drawn into the educational process. »

Mr. Nhoeng Nhan,

Director of Primary Education, Khmer Republic

«In some countries of this area of the world, a very small percentage of the population has the opportunity to get adequate education. Governments try their best to find a way to educate all their school age children. Besides the concern for literacy, they are also worrying about the adaptation of the school education to fit social demands and daily life problems. Furthermore, among the pupils who can attend primary school, a little more than 10 percent go to high school and almost 90 percent leave primary school and go back to live in their communities. The question now is how to fulfill the dual purpose of enabling the pupils who want to pursue further education and of equipping those who drop out of school with the

basic professional and technical skills adaptable to their environment and daily life.»

«... the delivery of mass primary education through the optimum use of resources within the local community, would not replace but effectively supplement the formal education system.»

«In view of the present world education crisis, and taking into account the above points of view, it seems that the most positive trend is for education to go back to form a «relinking» with the community.»

Mr. Rashid b. Md. Nor and Mr. Harith b. Muhammad Liki, Malaysia

«By community resources we mean all the human resources available in the community, the knowledge, skills and capacities of its people, lands and buildings and other assets owned either jointly by the community or by an individual and money or other liquid capital raised by the community»

«The early beginnings of education were through the Koran Schools, in most parts of the country,»

«To meet the need for education facilities in places where the Government was unable to provide schools, especially in remote villages, a number of villages formed Local Village Committees who built and supported schools called Native Voluntary or People's Schools»,

«... Chinese language schools. These were owned and maintained by the local Chinese Communities through generous donations by individuals, village and district societies, associations of people and members of the school committees of management who also voluntarily undertook to collect funds for the upkeep of the schools.»

«... small schools were built and maintained by the Indian communities wherever Indian estate population created a need.»

(Village Committees or Boards) «Beside managing the school... the Board is encouraged to raise funds from the local community to supplement government grants.»

«Parent - Teacher Associations... to enable parents to participate more meaningfully in the education of their children.»

«In remote villages where the number of children of primary schooling age is so few the concept of the Koran School could be used. A qualified teacher could be sent to live and teach in the village and a to supervise part-time instructors. The

Malaysian government does build small primary schools in these villages but finds it uneconomical to run them.

**Dr. Douglas G. Ellson,
Indiana University**

«Community resources are human as well as physical. The cost of education, can be reduced when schools are built with locally donated funds and labor, when members of local communities provide furniture and other physical equipment, but the total reduction in cost that can be achieved by this means is limited. The major expenditures in education are made for human, not physical resources. Everywhere teachers' salaries represent 70% to 80% of education budgets. The primary aim... is to examine the possibility of using locally available human resources to reduce the cost of teaching.»

«There is evidence to show that with the aid of a recently developed technology called "Programmed Teaching" people with relatively little education and no professional training can be trained very quickly to teach and teach well.»

«The common feature is not instructional level, subject matter, teaching method or teacher qualifications, What is the critical factor in the success of these new techniques? The answer is that two functions, the planning of teaching and the execution of teaching which in conventional teaching are performed by the same person, are radically separated. The planning of the teaching program is done by one person or group, the actual teaching operations are carried out by others, whose primary task is to teach with the materials and according to the operations specified in the program. The result is appropriately called «programmed teaching.» As we have seen, one result of the separation of the planning and execution of teaching can be an improvement in the quality of instruction. Another result, more important in reducing cost, is a lowering of the qualifications required of the teachers.

The separation of the planning and execution functions in programmed teaching may be compared with the separation of the functions of composers and performers which occurred in the field of music several hundred years ago in Europe and a thousand years ago in Asia. When all performers were also composers, good music was a rare commodity, and expensive. When composing was reserved for those who have the necessary very special qualifications and performers were not required to compose, it became possible for many more perform. Simultaneously

the quality of music improved and it became more generally available. In music, good composers are rare, potential performers are many. The same is true in education.»

Mrs. M. Wahjudi

Office of Educational Development, Indonesia

"Any community does have resources. However they are mostly latent, unnoticed, undiscovered, unutilized."

"... Power structures ... exist in most communities and very often exert exceptional influence. Consequently these top level power wielders are the most potential resources in the community. No less powerful are their wives...a living reality in Asian countries."

"There are people who are neither powerful, nor skilled nor knowledgeable but who are willing to help. They have a favourable attitude toward education, they are amiable people, who once mobilized are willing to extend support when requested."

(Social Groups) "Certain norms and values are possessed by those groups. These norms and values can be a motivating factor to provide support to education. Some formal groups like professional organizations, civic organizations, social organizations and the like have statutes or regulations which prescribe or facilitate such support."

"Any given culture has traits which in themselves are a resource. In Indonesia... the "goteng royong" spirit (mutual assistance) is still very much in evidence. When employed in education this spirit becomes one of the greatest resources."

(Identifying Resources) "Conducting a survey is supposed to be the best thing to do. However, in a village there are few, if any, who are able to design the instrument. It is therefore deemed necessary that a competent agency be assigned to do the job."

"In generating alternatives to the mobilization of community resources, we should first question what problems we want to solve by utilizing them."

"By every means possible educators should seek to get his local administrator's support for educational undertakings. In case it is hard to come in contact with the administrator himself, why not approach him through his wife?... Once the administrator is interested in education, the gate to social support is opened."

"The paddy field, the farm, the lake, the forest, everything in the environment can be utilized as open classrooms."

**Dr. B. Onyerisara Ukeje, University
of Nigeria, Nsukka**

«... It would appear that we in the developing countries have found ourselves in a vicious circle. Education, we have seen is necessary for all ; but we cannot provide formal education for all because we are poor ; and we are poor primarily because of our low level of education ».

«... Formal education being provided in the developing nations... is generally irrelevant and not sufficiently geared to the needs, the circumstances, and the aspirations of the developing nations. »

«... Education is more than the acquisition of knowledge ; it is more than an ornament ; and it is not exactly the same as schooling ».

«... The proposed integration of formal and non-formal education into a single system is to me extremely attractive and should be fully explored. Similarly one would recommend an integration of the system of schools with wider use of community resources ».

«... One of the most effective methods to bring about desirable educational reforms is through adequate reforms in teacher education and training. It is said that education unlocks the door to modernization. But in my opinion, it is the teacher who holds the key to the door ».

«... It is possible to mobilize community resources for the provision of the necessary funds for mass primary education under the school system » ».

«... By making education a shared function between the Government and the people, it is possible to increase significantly the provision of educational facilities ».

«... Rather than replace schools, it is possible and perhaps preferable to use community resources to supplement schools ».

**Mr. Bounthong Visayackd, Director Primary and
Adult Education, Laos**

«... The number of children already enrolled in 1971-1972 in public and private schools was only 43.8% of the number of school-age children ».

« The monks are the priests of the Buddha's teachings, but they have always been seen also as teachers responsible for educating the minds of the people. Each village has a temple, which from time immemorial has been as much an educational center as it has been a religious centre where every Lao could stay for a

time to receive instruction and job training. The temple was, indeed, the only place where teaching could take place. Even now, every Lao — especially in rural areas — will don the yellow robe for varying lengths of time and, while staying in the temple, learn not only the Buddhist prayers and psalms but also how to read and write.»

«Community Education Rural Centres (CERC,s) were initiated in 1962 with a view to enrolling as many children as possible : they serve at the same time as lower primary schools, youth centres and adult education centres; a CERC may therefore be either :

— a temple school, founded in any village where a temple is in existence ; or

— a public primary school ; or

— where there is no temple nor public primary school, a rural school built on the villagers' own initiative with a teacher (sometimes working part-time) selected and maintained by the community.»

«The CERC teachers are recruited among the young people of the villages who have completed 6 years of primary school.»

«... in consideration of the restriction of the actual budget and the lack of teachers, in order to extend education, even primary, to all the people, Laos will be obliged — not without justification — to call on the communities to contribute usefully and effectively to the expansion of education. The villagers are responsible to support CERC teachers and to construct certain school buildings ; they also have an association, a P.T.A., which works side by side with government officials for development and progress in education.»

Donald G. Simpson,

Senior Programme Officer,

Social Sciences and Human Resources

International Development Research Centre,

Ottawa, Canada.

«If we look at the realities of the primary school classrooms in many towns and villages, it might be fair to say that the present system in many cases has not yet been given a fair trial»

«Regardless of the problems associated with schools, the parents. are not going to allow them to quickly disappear or to follow the dictates of educational planners or international agencies.»

«The desires of the youth and their parents may... be at great variance with the planners notion of «ruralizing» rural schools and if this is the case the prospects for the success of such a program are very remote indeed.»

"... let us not expect too much of «educational technology in your communities."

"... Sheffield ... at Columbia University writes that ... Motivated in part by a desire to by-pass the poorly-educated local teachers, many technological innovations flounder eventually on the very personnel they were unable to ignore."

"The formal system is not likely to disappear ; it will survive and expand as will the problems associated with it. The real danger may be that in promoting a non-formal approach to education and in providing massive sums for those who respond to this stimulus, advocates of this position rather than making education more flexible, relevant and efficient may be primarily assisting in the development of a second parallel expensive system."

"Many donors are looking for the gross alternatives that will stimulate a massive change. The concepts are grand and exciting but perhaps in many cases they represent intellectual indulgences which the less developed countries can ill afford."

"Let us search for ways of preparing and assisting teachers to be much more effective in dealing with a larger number of students."

"We may be surprised to find how few of these exciting local projects can be rapidly expanded into a national program."

"I feel some uneasiness about the "No More Schools" title. Does it really imply the main thrust of this project ? Will it be a liability in gaining local support ?"

"Assuming that the pilot projects are a success one is still left with the problem of multiplying the pilot projects across the system."

"Packaged programs of educational aid organized outside the community are an incomplete and sometimes irrelevant solution. In other words, maximum use should be made of the resources within the community whether the community we are talking about is a nation, a province or a village."

M.R.W Surathavaj Srithavaj, Acting Director
Elementary Education Division, Thailand

"Some areas are relatively cut off from towns, and the only way to go to

town is by walking. This is why most graduates from teacher's training school refuse to teach in the remote rural area..."

«... In Thailand primary education covers seven academic years... We can reduce seven years to six years and save a lot of money for improving school programs. At present, students go to school one hundred and eighty days a year. We may increase the school days to two hundred and ten days a year and end primary education within six years.»

« More attention should be given to establishing a **resource center** to take the responsibility of in-service training of administrators, school principals, and teachers.»

«... This center will also serve as a place for educational investigation and research...»

«... From this center, there would be a group of teachers who would take turns in going out teaching the children in the remote rural area by means of mobile schools.»

« ... A Mobile School Programme should be implemented to provide all rural children with... education. In the future, a long line of caravans, long used by merchants, will be replaced by educators... On the horse's back will be teaching materials and young teachers in place of goods ...»

« With the Mobile School Programme young teachers are expected to build up a library to be used by adults and school children in the village. While the mobile school is away from the village, some educated and resourceful villagers will continue to encourage the children and the villagers alike to use the service of library.»

«... Even if our countries are agricultural societies, we are, none the less, using various products of modern technology. The vital thing is to limit our desire to consume technological products so that we may prolong our traditional happy way of life.»

Miss Chong Hoo Tun, Assistant Director
People's Association, Singapore

« Bridging the gulf between formal and out-of-school education systems is important for... the functionality of adult education is very closely related to the lives of individuals and the needs of society.»

« There are no less than 40 agencies in Singapore, apart from the tools of mass media such as television, radio and the press which themselves have great potential as life-long education agencies.»

"...Besides the face-to-face methods of communicating with people mass media has also been extensively exploited to bring home to the people the economic, social and political issues facing the nation. The press, radio and television are important educational tools which have great potential..."

"The People's Association can be said to be the major social education agency in Singapore. It was set up in 1960 to organize and promote group participation in social, cultural, educational and athletic activities for the people of Singapore so that a multi-racial community could transcend sectional loyalties and reach for a national identity. To achieve this aim the full-participation of the people is encouraged..."

"Members... come from all walks of life and are local leaders who enjoy high esteem among the residents... they provide the key to better local response and participation in the various government campaigns and other services provided by the community centres. The moral support of these unselfish community workers is a key factor in the success of numerous community projects and national campaigns."

"In our programme of providing adult education to the masses, the People's Association...attempts to orientate the minds of the public towards shaping a national cultural and breaking inter-ethnic prejudices. With that aim in mind, cultural activities are organized in the community centres."

"The renovation and reform of education, its financing and sustenance cannot be carried out without the cooperation and coordinating efforts of the government and the community. This is manifested in Singapore in the successful contributions of the innumerable non-formal education agencies towards the provision of life-long education. It is hoped that through time mass formal school education will be promoted at reasonably low cost and sustained through more community participation."

Mr. Phan Cong Minh,

Director, Directorate of Primary Education and

Mr. Cao Minh Khai,

Director, Primary Education Teacher's Training Center, Vietnam.

« From the old days to the present time, we have entrusted the task of teaching to the teachers... After sending their children to school, parents no longer assume primary responsibility for the education of their children ».

" . . . everybody who lives in the same community must be responsible

for the education of their children. People in the community . . . such as parents, educated villagers, skilled farmers, carpenters, masons, fishermen, military men, religious bodies, boy-scout, 4-H groups, can also be involved in education ».

« All the buildings: churches, communal houses, temples, or anything that has a roof can be used as classrooms, as cultural centers and student unions, or as activity centers for the community.»

« Using community resources... people will realize their responsibilities and the necessity of education for their children, for themselves and for all members in the community... they will willingly contribute their manpower, finance and materials to the development of the community.»

«... there (also) are disadvantages in the use of community resources, since some communities are rich and others are poor. In the rich communities, there are a variety resources... In the less rich communities, resources are poor and people barely earn their viling. So they cannot contribute or participate in the community activities. Thus, we cannot offer equal opportunity for all in education.. »

«... self-engagement is necessary. Those who are volunteers and those who are concerned with the education of their children can spend their time to help... But mere voluntary participation is not sufficient. The second requirement which is not less important is one's training or skills. We may ask whether these active voluntary members meet the requirement to accomplish the assigned work perfectly...»

« Press and mass media should also play a role of appealing for the cooperation and contribution of the community members to education.»

Dr. David J. Klaus,

American Institutes for Research

«Interestingly, the non-professional teacher has always had a significant, but rarely formalized, role in the educational process. Until the rather recent development of «public» schools, most fundamental learning took place under the auspices of untrained teachers, often parents, or siblings, and sometimes religious instructors or apprentice masters. Even more remarkably, the first large-scale public schools created in England and America early in the nineteenth century achieved practical success only because they relegated much of the teaching responsibility to non-professionals through «monitorial» systems of instruction. »

«Four separate models, or groups of models, were identified (in the reported survey) which make use of students as teaching resources.»

" Probably any of the four models... could be made to work in any of the (developing) countries surveyed. "

" In light of their needs and preferences, the developing countries are far more likely to have an interest in programs which aim toward gains for the learners than those which would result in gains for the tutors, "

" The direct transfer of existing, highly structured programs which make use of students as teaching resources as the primary vehicle for the learning of all children is not likely to be accepted. "

" The adoption of a system utilizing students as teaching resources will not radically change the numbers of children who are exposed to education or the number of years they can attend school. "

" In-class cooperation, even where regarded as potentially beneficial, did not seem to be either a good use of class time or an easily manageable program. "

" Cross-grade tutoring is desirable, but mainly for remedial assistance and no encouragement was received for including this kind of instruction as part of the regular school program in order to increase individualization. "

" Monitorial instruction is considered to be a practical and useful means of assisting teachers in grouped classrooms, but the monitor would be expected to make the teacher's tasks easier rather than the students' learning better. "

" Ancillary teaching is appropriate only where it is recognized that many children are not attending school but would welcome the opportunity to learn, even from a volunteering primary school student. "

" On the other hand, the use of students as instructional resources represents a significant opportunity to realize more effective results from the time, money and effort already being invested in education by increasing learner practice, by heightening individualization, by expanding remediation and by making better use of the skills, knowledge and energies of available teachers."

FROM THE DISCUSSIONS

The Center in its enthusiasm to be the recipient of as many new ideas as possible, scheduled two hours each afternoon for panel discussions and for a general "brainstorming" of ideas on the use of community resources. Although the attendance of nearly 100 persons prevented an entirely free play of ideas, the quality of those coming out of the discussions did not suffer — as can be witnessed below.

Rather than be comprehensive and unduly lengthy, this summary of « What we have learned » from the discussions is selective. There are no references to persons or direct quotes, and in many instances our command of language falls far short of the expressive clarity of that of the discussions. Our apologies.

- ... We need to deal with ideas not labels.
- ... Persons of influence in communities must be enlisted as « change agents » as an initial step in unleashing other community resources.
- ... Basic learning needs should be identified with community members to provide minimal educational goals. And we need to involve the learner » in identifying these needs.
- ... To adapt the no schools concept in the primary level would require a change in the structure of secondary education.
- ... Although there is a need for the no school system in the rural areas (primarily because of the refusal of teachers to live there), its adaption alone there would result in inequities in the forms of instruction in rural and urban communities — the formation of two societies.
- ... No more school deserves to be tried out in cities.
- ... Preliminary discussions are underway to conduct urban tryouts of no more schools.
- ... Education should be conceived not with preserving schools but with the learning of children.
- ... Change frightens people. The successful results of pilot projects should come first to prove feasibility.
- ... It is not necessarily a fault in the present system of education — rather it is the economic factor of cost which demands change,
- ... A no more schools system does not mean closing down school buildings. It means using more things to teach more children.
- ... A breakthrough could come for a new system (such as no more schools) if employers or government agencies were to show a preference for the product of that system. Perhaps the quality of the product could be shown by the self employment of the system's graduates.
- ... Most of human learning does not happen in the school.
- ... With the rapid growth in population that we are experiencing, there is

no way within traditional forms of education that quality can keep up with quantity.

- ... It has taken a long time to achieve the formal structure of education that we now have, and it is understandable that present education will resist substantial change, such as no more schools.
- ... The Malaysian historical experience of locally initiated primary schools of several type indicates that community resource use is far from a new concept :
- ... We need important breakthroughs, so let's take a specific innovative task and show people that it will work.
- ... Who is to set education goals ? There will always be planning at the National, regional and local levels, so national planning bodies should be the initiators, but there should be a chance for modifications at the local levels.
- ... Educators must face up to the fact that the system we have been following is about to break down. Who can prove that it takes 20-22 years to be a good doctor or lawyer. The military turned out professionals in 90 days during World War II.
- ... Education is a major employer, but if you close this avenue of employment what is the alternative ?
- ... A gradual and systematic introduction of a no more schools project may avoid the dislocation of present teachers.
- ... The Philippine continuous progression scheme is one step toward no more schools.
- ... Countries with a broad rural base probably have more need for a no more schools system.
- ... Having paid their taxes, people want to leave education up to the government.
- ... Effective instruction requires 100 hours of planning for 1 hour of teaching.
- ... Programmed learning will not work by itself ; it must have institutional support.
- ... Self-instruction must be motivated, scheduled and monitored.
- ... Secondary school and university students can be gigantic human

resources to give to a community. This is done in the Philippines, Indonesia and Iran.

- ... If younger children need to learn and use — older children need to give and teach.
- ... In the past community resources were only used to supplement what happens in the classroom. Now is the time to tear down the walls and make the community the school.
- ... Causes of dropouts include the factors of distance, economic burden, disinterest and health. A continuous progression scheme can overcome much of these causes, at least to grade six.
- ... When students have a say in what is being taught, the dropout problem may diminish.
- ... The in-school off-school approach can reduce educational costs by an increase in student — teacher ratios and by the free use of personnel from non-education departments.
- ... One way to reduce cost is to divide the task of education into supervising, teaching and mobilization resources. Non-teachers can do part of these jobs.
- ... Teaching training should be short and compact. We should give more time to practice and to learning how to solve problem from expert teachers.
- ... Teacher training is often 10 years behind needs and practices. Teachers should be taught both how to use the resources of community and how to serve themselves.
- ... The lack of understanding of top administrators has caused the abandonment of worthwhile programmes such as rural teacher preparation.
- ... Teacher training institutions are often second-rate teachers.
- ... Teachers typically are unable to make adequate instructional plans.
- ... In the past student apprenticeship provided a profound connection between learning and doing, i.e. creating. Cutting this relationship can lead to tragic consequences. In Tanzania, President Nyerere is quoted as saying that children used to learn as they worked, and now they just learn. We need to restore the concept of social apprenticeship in which the children themselves are the major resource.

- ... The use of students as teaching resources represents an alternative to either teacher-based or material—based systems, or this approach could be used to support these other educational methods.
- ... Education makes use of what we know about learning just as carpentry makes us of what we know about wood. Making a carpenter responsible for education may deprive us both of quality education and quality houses.
- ... We tend to overestimate the academic area and to underestimate the importance of commitment and attitude.
- ... The military, long a user of programmed teaching, can train illiterates in a short time to use and maintain extremely complicated machinery.
- ... Teacher training curricula should be revised to reduce the theoretical load and to increase learning by experience.
- ... The «super-human» task of teachers can be reduced through optimum use of local resources.
- ... Our most deprived body of children are the girls of the region.
- ... Programmed teaching is not restricted to any particular subject, any particular school level or any particular teaching method.
- ... There are many potential performers (programmed teachers) but not enough composers (developers of programmes).
- ... Transfer of the cost burden to local sources does not represent any real total cost reduction.
- ... No more schools may be a feasible ultimate goal, but the use of community schools may be a needed mid-way point.
- ... Developed countries have already gone through many of the problems we are facing now. We cannot use the same methodologies as developed countries.
- ... Rural parents seem to be more interested in their children's learning than on their own.
- ... There is a need to involve local persons in the conduct of field research.
- ... We should welcome prophets such as Illich and be thankful that it is still possible for one man to shake every major university in the world.

- ... We are expecting too much of the school - expecting it to answer all world's problems.
- ... External (particularly donar) ideas can be introduced but should never be imposed.
- ... Parents can help in a variety of ways, including the building of schools, giving money and time, act as consultants, etc.
- ... One school system used cards with names, skills and available time of community members as a way for teachers to select and enlist support.
- ... If the personality and ability of the head teacher is appropriate (example of Kenya) he can mobilize resources.
- ... The key person is important ; we should have ways to identify such people.
- ... Nutrition plays a role in efficient and effective instruction because children must be healthy to learn effectively.
- ... Numerous government agencies seem to be in competition for local resources, particularly people. Coordination is necessary.
- ... If a solution does not «solve» a problem, we shouldn't support it in the first place.
- ... The statistics of population growth and school capacity could be solved if we could find a way to reduce primary schooling to three years and to start youngsters at a later age.
- ... An extremely valuable community resource is «your friendly family planner». The problem of population growth (which is approaching solution in Singapore) is a burden that will defeat the best efforts at mass primary education.
- ... INNOTECH has focussed on the biggest factor of expense in its research planning : the teacher.
- ... «Low Cost» (as in the Seminar title) is a constraint related to the alternative solution that INNOTECH is working on for mass primary delivery. The real target is not «low cost» it is effective education of all youngsters.
- ... The number of out-of-schoolers is likely to increase.
- ... Mobile Schools need not use tents, per se, shacks can be used as well.

- ... University students in both Thailand and Indonesia spend time in rural communities in teaching roles.
- ... We could use local newspapers and radios as resources.
- ... Singapore uses schools for two shifts during the day and for adult education at night.
- ... The problem of community resources is which resources to use, many of which are not so good.
- ... The most expensive education is that which produces unemployed graduates.
- ... Students represent the one local resource that cost nothing (even in terms of their own time because they learn by teaching).
- ... The resistance to students-as-teachers is the « unionism » of the professional educator.
- ... Tutorial programmes should be added gradually, not all at once, and they require constant (not intermittent) monitoring for maintenance and improvement.
- ... Consolidated schools fail in regions without roads.
- ... INNOTECH plans the no more schools project as an evolutionary rather than a predeveloped model.
- ... We would do well to identify and classify all community resources for future use. A starting breakdown might be those that supplant schools and those that supplement schools. Our cataloguing should also encompass the appropriate use of each.
- ... Teacher training institutions should provide guidance in appropriate use of resources.
- ... Students as teachers can significantly increase the number of students taught by one teacher.
- ... Teachers, although generally willing to use student help, need guidance in its use - perhaps a «how to» pamphlet.
- ... Asians don't have to follow the paths of the West particularly the traditional formal school system that was forced on many by colonial powers.

... We should remember that the education system, just as any other aspect of community life, is a very real part of society.

FROM TRAINING PARTICIPANTS

A number of our invited speakers reminded us of the importance of feedback in education and training. INNOTECH does more than host seminars and conduct field research ; a major role of the Center is training. We were fortunate during this Seminar to have present 43 key educators from the eight SEAMEO member countries who are currently participating in a three-month course on educational planning and technology. The staff welcomes them as colleagues in a cooperative effort to solve the difficult educational problems of this Region. And, as colleagues, they have given us feedback on «What We Have Learned.» The Center thanks them most sincerely for their thoughtful contributions which will be given every consideration in planning our future activities. These feedback comments, occasionally shortened or paraphrased are listed on the next several pages. In response to the question. « What one idea from the seminar will most help INNOTECH ? » :

- ... Conduct future seminars simultaneously in French and English
- ... Provide for small-group discussions during seminars to increase the opportunities for participation
- ... Attempt to adapt solutions successful elsewhere to the problems of SEA.
- ... Examine all community resources
- ... Maximize use of community resources
- ... Focus on existing resources to share costs
- ... Means to use local resources to share costs
- ... Non-formal education
- ... Promote low-cost education
- ... Concentrate on low cost rather than no more schools
- ... Make sure that high quality is maintained in any low-cost delivery of primary education
- ... Recognize limitations of the no more schools approach, understanding that some aspects of education require formal education
- ... Train persons in programmed instruction so that countries will be prepared for the introduction of no more schools
- ... Try out no more schools in an urban setting

- ... Try out no more schools in Vietnam
- ... Link innovation with effectiveness and high standards
- ... Invest more effort in the improvement of traditional approaches to education
- ... Incorporate «in-schools off-school» approach in programme
- ... Recognize the «in-school off-school» approach as a possible half-way alternative to both no more schools and the traditional system
- ... Investigate the potential of the Mobile School Programme
- ... Extend programmed teaching to new subjects and to urban settings
- ... Programmed instruction
- ... Using students to help teachers
- ... Using students as teaching resources
- ... The «in-class cooperation» model of student tutoring.

Participant feedback in response to the question, «What new or innovative idea most impressed you this week?»:

- ... No more schools (8 «for» and 1 «against»)
- ... In-school off-school (10 «for»)
- ... Students as teaching resources (6 «for»)
- ... Mobile schools (3 «for»)
- ... Use of the military
- ... Need to maintain academic standards
- ... Non-formal education
- ... Programmed teaching
- ... Harambee school
- ... Criticisms of projects already underway.

Not only do the above lists provide needed feedback to the Center, they also exemplify the quality and richness of the presentations and discussions.

THE FOREGOING IS "WHAT WE HAVE LEARNED"

APPENDICES

ADDRESS BY H. E. PHAN QUANG DAN, MINISTER OF STATE REPRESENTING H. E. THE PRIME MINISTER OF THE GOVERNMENT OF THE REPUBLIC OF VIETNAM, AT THE OPENING CEREMONY OF THE INNO-TECH REGIONAL SEMINAR ON « USE OF COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY EDUCATION.»
SAIGON, 12 NOVEMBER 1973.

Excellencies

Ladies and Gentlemen.

It gives me great pleasure to see gathered here in our Capital City such a large number of distinguished educators and educational specialists from within and outside the Southeast Asian region. On behalf of the Government and people of the Republic of Vietnam, I welcome you, and wish you a most pleasant and fruitful stay in our country.

The theme of the Seminar suggests that you are looking for resources which hitherto have been unused, or under-used, or misused entirely, insofar as education of our youth is concerned. This, indeed, is a very commendable pursuit as the costs of education constitute a major problem in our countries.

However, in our efforts to reduce the costs of education, we must guard against reducing the quality of the education our children will receive as a result of our efforts to make our education system more efficient and less costly. I would, therefore, with your permission, suggest that the title of the Seminar read « Use of Community Resources for Providing Low Cost But High Standard Primary Education.»

It may be presumptuous to estimate in advance what the long-range effects of this kind of group effort will be, but one can at least foresee a few immediate benefits to be derived from this Seminar.

First, I think the debates at the Seminar and the dissemination of its results will help promote an awareness among our educators and among the people of our communities that there is an urgent need for creative solutions to our present educational ills and that the possibilities to meet this need do exist.

Secondly, while every one of us seems to agree that the responsibility for educating our youth does not rest with the State alone, few of us have given serious thoughts on how this responsibility can be shared by all concerned in a systematic reorganization of our educational establishments.

I am sure the Seminar will shed new lights on how the problem is to be dealt with.

The third benefit, I think, is regional cooperation. Here again, all of us feel that regional cooperation is a powerful concept that will help us achieve things which otherwise would be almost impossible.

Speaking of regional cooperation, I think the Southeast Asian Ministers of Education Organization has made some significant progress in this direction. The Republic of Vietnam has pledged its full support to the Organization and will contribute insofar as our resources permit, to making it a well-coordinated mechanism for the development of education in this region.

As to the SEAMEO Regional Center for Innovation and Technology - INNOTECH - for which my Government is assuming primary responsibility, I wish to assure you that we will do whatever we can to help it operate effectively.

Our hearts are with INNOTECH, and nothing will please us more than to see the fruits of INNOTECH being shared by all the member countries and elsewhere in the not too distant future.

I now have the pleasure to declare open the Regional Seminar on «The Use of Community Resources in Providing Low Cost Primary Education.»

Thank you.

APPENDIX 2

MESSAGE FROM Dr SUDJONO D. PUSPONEGORO, SEAMES DIRECTOR,
DELIVERED BY Dr CHETANA NAGAVAJARA, SEAMES PROGRAMME
DEVELOPMENT ASSISTANT AT THE OPENING CEREMONY OF THE
INNOTECH REGIONAL SEMINAR ON « USE OF COMMUNITY RESOURCES
IN PROVIDING LOW COST PRIMARY EDUCATION ».

SAIGON, 12 NOVEMBER 1973.

Mr. Minister of State representing H. E. the Prime Minister
Mr. Minister of Education
Excellencies,
Distinguished Participants
The INNOTECH Director and Staff
Ladies and Gentlemen :

I offer my apology to you for not being able to be present at this very important gathering owing to the pressure of work in preparation for the annual Project Directors and High Officials Meeting, which is due to start next Monday. However, I can assure you that I take a very strong personal interest in your work, and shall be most eager to learn about the conclusions and recommendations of the Seminar. I have, on a number of occasions, stressed the importance of the project on the delivery of mass primary education which has been entrusted to INNOTECH, and I am particularly pleased to note that INNOTECH has found it possible to link the special project with its on-going programmes. The last two regional seminars have been structured to serve this large-scale project, and we can now say that INNOTECH is moving forward with a clear direction.

Permit me to say something about the role of INNOTECH in the context of educational development in Southeast Asia. When we launched our INNOTECH Project some years ago, we were so overwhelmed by the magnitude and complexity of educational problems that we had to formulate our objectives in very broad terms. Consequently, it had not always been easy to explain the INNOTECH concept to outsiders, and this, naturally, had resulted in certain difficulties in finding external support for INNOTECH. It took us quite some time to free ourselves from speculative and theoretical disputations and to get down to formulating specific projects which are meant to solve specific problems. Let me confide in you that the task of the SEAMES Director in «selling» INNOTECH has now become a little lighter as a result of clear thinking and precise planning on the part of the INNOTECH staff themselves. On my recent visit to Europe and North America,

it was possible for me to interest quite a number of friendly countries and agencies in the project on the delivery system of mass primary education, which does not only make sense to us, but also to people outside the region. Our problems may not be identical with those of the more developed countries, but we can formulate our problem-solving process in such a way that other people may find our endeavour meaningful. This SEAMEO has done, and the future of external support may look brighter than, say, a year ago.

Indeed, we are dealing here with a formidable problem. With the rising costs of education, aggravated by the alarming population explosion, and with the advent of new knowledge and skills, no educator can ever remain idle and «traditional». The problem of how to work out an effective and economical delivery system of mass primary education is not being discussed here for the first time, but dates back to as early as 1970 when we organized a brainstorming session. But it was at the Regional Educational Planning Seminar in 1971 that the idea really crystallized. The Technical Working Group which met in 1972 included, as one of the priorities of the «SEAMEO Educational Development Programmes for the 1970's», the project on the mass delivery system. The present Seminar is, therefore, part and parcel of a larger endeavour which will preoccupy the educators of the Southeast Asian countries for the years to come and which, I am certain, might turn out to be a showpiece of our INNOTECH.

I have noticed in the guidelines for the Seminar that you will be discussing the various facets related to the use of community resources. I have noted that you will be tackling also the «no-more-school» approach which I hope is more than just Illich-inspired. While I am aware of the necessity to postulate an extreme case as a frame of reference, I must add a word of caution that we must make sure that innovation in this respect can be linked with effectiveness. Schooling or de-schooling are concepts, which, let us face it, we have borrowed from the west. In the traditional culture of Southeast Asia, you may find something which is more practicable for Southeast Asian conditions and which may not lend itself to simplified categorization like schooling or de-schooling. Whatever we do, we must not lose sight of the conditions and the needs of our people in the region.

I am glad to see that, as in previous seminars, INNOTECH has been able to invite professionals from outside the region to come and share their ideas with us. On the one hand, Southeast Asia may possess characteristics of its own which we may like to consider as unique, but certain problems are of a universal character, and the further we look around, the better we shall be in a position to recognize our own strength and weaknesses. We

cannot claim to have exploited community resources in our educational endeavours to the largest extent possible, and it is precisely here that we can learn from others.

Excellencies, Ladies and Gentlemen : I said earlier, at the Inaugural Ceremony of the new INNOTECH Center in August this year, how much we owe to the generosity of the Government of Vietnam for everything it has done to enable INNOTECH to find a happy home here in Saigon. Let me conclude by paying tribute once again to the host of INNOTECH.

Distinguished participants : you have a heavy agenda before you. Let me assure you that your deliberations and recommendations will always find a sympathetic response from SEAMEO. I wish you every success in your deliberations.

ADDRESS BY MR. LY CHANH DUC, INNOTECH DIRECTOR, AT THE
OPENING CEREMONY OF THE REGIONAL SEMINAR ON « USE OF
COMMUNITY RESOURCES IN PROVIDING LOW COST PRIMARY
EDUCATION », SAIGON, 12-16 NOVEMBER 1973.

Mr. Minister of State
representing H.E. the Prime Minister
Your Excellencies,
Distinguished Guests,
Ladies and Gentlemen,

You have done us a very great honour, Mr. Minister of State, by representing His Excellency the Prime Minister to preside over this Ceremony and to declare it open. The Seminar participants and the INNOTECH staff are most appreciative of this mark of sympathy and interest on your part, and on their behalf, I sincerely thank you. Our gratitude also goes to you, Your Excellencies and distinguished guests, for your presence on this occasion which means a great deal to us in terms of encouragement and support. And to all those agencies and individuals who have contributed to making this Seminar possible, we say a heartfelt « thank you » and we pledge to continue to deserve their confidence.

This is the first Regional Seminar to be organized by INNOTECH since the Center moved from Singapore to Saigon in July this year. Participants of the Seminar include delegates from the SEAMEO member countries, and speakers, consultants and observers from various parts of the world, some coming from as far as Canada, the United Kingdom, Nigeria, and the United States.

The idea of this Seminar grew out of a common concern for the education of our youth. The problem is how to enable all the children to achieve at least a primary education.

Everyone knows that fewer than half the children in Southeast Asia are able to complete primary school. More and more educators have come to realize that building more schools, training more teachers, producing more textbooks and other teaching aids will not even solve the quantitative aspect of the problem. Developing countries just do not have the means needed for this kind of undertaking. Besides, it has become more and more obvious that increasing the educational facilities is not the answer to the increasing demand of our ever-growing populations. And this is so in spite of the fact that considerable progress in education has been made during the past two or three decades. A

conclusion to be drawn from this state of affairs is that other forms than the traditional forms of education must be found which will enable the developing countries to meet the need for education of their youth. And this is precisely the reason why SEAMEO, the Southeast Asia Ministers of Education Organization, has given to INNOTECH the task of « developing an effective and economical delivery system for mass primary education ».

INNOTECH is exploring a number of approaches to this problem. One is the development of means for deriving core educational objectives so that the curriculum itself can be pared down to those things which are most essential to be learned. A second approach provides the topic of a book which INNOTECH expects to publish in 1974, and can be stated thus : Within the present school framework, are there any possible changes which could result in at least doubling the enrollment without doubling the teacher's classroom time, without increasing the budget, and without reducing the skills and knowledge to be learned ? Indeed, one can envision a number of ways in which schools can be rescheduled so that many more children may receive a primary education without increasing the number of teachers or schools. For example, a child might go to school only two hours a day, or three days a week, or two months a year, or he might finish primary education in only two or three years rather than five or six as is now the case.

A third approach, which has been titled « No More Schools », minimizes the use of formal classrooms and makes the teacher's role primarily one of managing the self-instruction of a large number of children. This approach will utilize community resources to a large extent ; for instance, people with particular skills such as midwifery or carpentry would be expected to take part in the instructional process, parents might help as teachers after proper training, and older children might be guided in the tutoring of younger ones. Again, community facilities such as meeting halls, pagodas and private homes might be made available as learning centers.

Research into each of the above approaches will certainly require the participation of the people of the community in which the research work is conducted, both the micro-community of the village and the macro-community of the nation.

This Seminar is primarily interested in identifying hitherto untapped community resources, those resources which may well provide an answer, or at least a partial answer, to the problem of costs in education. Seminar participants have been asked to come with ideas—preferably thought-provoking ideas—on the what, where, why, and how of community resources in relation to mass primary education. Brainstorming and panel-discussions will be used throughout with the expectation that this

procedure may yield more interchange of ideas which in turn may throw new lights into this urgent problem. We are aware that solutions cannot be found overnight. However, we do believe that both the work of this Seminar and the approaches mentioned above constitute the first step in the right direction.

We nourish high hopes for a successful outcome of our research, but I should add that your continued encouragement and support will certainly raise our hopes lot higher.

Thank You.

SEAMEO Regional INNOTECH Center

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**REGIONAL SEMINAR ON « USE OF COMMUNITY RESOURCES IN
PROVIDING LOW COST PRIMARY EDUCATION »
SAIGON 12-16 NOVEMBER 1973**

LIST OF PARTICIPANTS

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