A.I.D. Project Impact Evaluation No. 38

A Low-Cost Alternative For Universal Primary Education In The Philippines

September 1982

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PROJECT IMPACT: A LOW-COST ALTERNATIVE FOR UNIVERSAL PRIMARY EDUCATION IN THE PHILIPPINES

PROJECT IMPACT EVALUATION NO. 38

by

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FOREWORD

In October 1979, the Administrator of the Agency for International Development (AID) initiated an Agency-wide ex-post evaluation system focusing on the impact of AID-funded projects. These impact evaluations are concentrated in particular substantive areas as determined by AID's most senior executives. The evaluations are to be performed largely by AID personnel and result in a series of studies that, by virtue of their comparability in scope, will ensure cumulative findings of use to AID and the larger development community. Project IMPACT: A Low-Cost Alternative for Universal Primary Education In The Philippines, was conducted in October 1981 as part of this effort. This study focuses on a project that was not funded by AID. It was included in the impact evaluation series because the project involved a test of a low cost approach to primary education -- long an area of AID interest. A final evaluation report will summarize and analyze the results of all the studies in this sector and relate them to program, policy, and design requirements.

PREFACE

The purpose of AID impact evaluations in the education sector is to generate information to help reassess existing AID education policies and programs and to shape those of the future. Project IMPACT* (Instructional Management by Parents, Community, and Teachers) in the Philippines was not an AID project. It was, however, developed by the Center for Educational Innovation and Technology (INNOTECH), an AID assisted organization, and funded by the International Development Research Centre (IDRC) of Canada. This evaluation was initiated at the request of IDRC to stimulate external assessments of the project.

The team was composed of an AID generalist as team leader, an education officer, and an anthropologist. Field work was supplemented by two Filipino research assistants. The evaluation was conducted between October 15 and November 3, 1981. One week during this period was spent visiting 12 IMPACT and control schools in the provinces of Bulacan, Cebu, and Zamboanga del Sur. In addition to visiting schools, team members interviewed administrators, teachers, and parents knowledgeable about IMPACT and conventional education delivery systems.

This brief study, within very limited margins, seeks to gain some impressions of how that project has affected the communities in which it was carried out. We say "limited margins" due to the very limited amount of time, resources, and other constraints (e.g., format) placed on the study. These limitations naturally forced the team to come to early and somewhat risky generalizations which, by their nature, can only point to the need for further study.

With the limitations of this study noted, the team wishes to express sincere appreciation to the many persons and agencies that graciously supported us in this task. These include Filipino government officials and educators who so thoroughly briefed and accompanied us on site visits; INNOTECH management and staff; and USAID/Philippines for its logistics support. We also wish to thank Mrs. Gracia Esquerra and Mrs. Teresita Rivera for their excellent research support.

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*The reader should not confuse the title of the project, IMPACT, with the impact evaluation studies that AID sponsors. All references to the project will be in uppercase letters to avoid confusion.

SUMMARY

Funded by the (Canadian) International Development Research Centre (IDRC), Project IMPACT was an experiment launched in 1974 in the Philippines to test a low cost approach to primary education. The approach itself was developed by the Center for Educational Innovation and Technology (INNOTECH), a research arm of the Southeast Asian Ministers of Education Organization (SEAMEO). Though the experiment was funded by IDRC, INNOTECH and SEAMEO were established in the late 1960's and early 1970's with assistance from AID.

In this experiment, the professional teacher becomes an Instructional Supervisor (IS) who orchestrates an ungraded learning system for about one hundred (or more) primary school students. Under the supervision of an IS, students are divided into groups of five to ten learners, and are taught by a Program Teacher (PT), who is one of the intermediate (Grades IV-VI) primary students, using programmed teaching materials called "modules." The learning process is self-directed, self-paced, and ungraded, enabling learners to proceed independently at their own speed. Parents and skilled workers serve as community resource persons. Clerical, administrative, and logistics support is provided for the IS by an Instructional Aide (IA), who is a high school or primary school graduate from the community. The school itself becomes a Community Learning Center (GLC) consisting of classrooms, central learning centers where all instructional materials are kept, and open-air kiosks, where small group sessions are held under the direction of the PT.

The objective of Project IMPACT was to show that this approach to universal primary education could sharply reduce per student costs without any loss in the quality of education being imparted. Evidence from cost effectiveness studies and academic performance tests administered to students in IMPACT and (conventional) control schools, clearly demonstrate that this objective was achieved.

Impact also appears to enjoy one other advantage over conventional schooling. According to teachers who have used both approaches, the IMPACT student appears to gain greater social poise and personal initiative than his conventional counterpart. Teachers explained that this perceived difference in social development may be due to the greater stress on independent study and peer group interaction that characterize the IMPACT pedagogy.

On the other hand, there has been no attempt to use the savings realized from IMPACT in ways that would enable IMPACT schools to maintain the same qualitative levels that obtained when the Project was first initiated. Over the years, there has been a serious depletion of equipment and texts, and no attempt to repair school facilities which are an integral part of the IMPACT approach. This has led to declining support for IMPACT schooling among professional educators at the oldestexperimental sites. Local area teachers and administrators argue that while the IMPACT approach has merit, it cannot be sustained without an adequate supply of the necessary support items that distinguish it from more conventional approaches.

Reactions to IMPACT schooling among parents have been mixed. Generally, parents had definite expectations about how the education system ought to teach their young. Central to these expectations was the belief in a structured system of successive classes and grades, each one associated with corresponding levels of increasingly difficult curricula. Also central to these expectations was the belief that such a structured system required the presence of a professionally trained teacher in the classroom, to provide sustained guidance to the young as they progressed from one grade to the next. The IMPACT approach, with its emphasis on peer group teaching, independent study, and ungraded classes, violated these expectations, and aroused some feelings of anxiety among parents about the adequacy of the education their children were receiving. The more common reaction was that IMPACT served best the interests of the brightest youngsters, who could work on their own, and who were most likely to have the self-assurance to teach their peers. IMPACT was viewed as serving less well the interests of the average student, who, it was felt, needed the regular guidance of an adult teacher within a conventional framework.

While it is too early to gauge its long-term effects, Project IMPACT does provide lessons from which both donors and host countries can profit, A system like IMPACT that has demonstrated cost effectiveness without loss in academic quality has potential utility for countries that find themselves faced with rising education costs, a shortage of teachers, and a burgeoning primary school-aged population. As one of the very few demonstrably viable solutions to this dilemma, IMPACT deserves support from the donor community -- both for replication in other settings as well as for continued evaluation of its effectiveness and impact.

At the same time, some specific requirements must accompany donor support to an experimental project in order to give the effort the best possible chance for continuing success. This is

particularly true of an experiment that represents a considerable departure from popular expectations of what an academic education should do for the young.

The issue of maintenance and in-country replication following donor withdrawal must be initially addressed during the design phase of a project, and periodically reviewed during the course of implementation. As part of this exercise, the project design should include a plan -- approved by the host government -- for the gradual replacement of donor assistance with host country/local resource support.

This process of articulation and periodic reevaluation would serve several purposes. First, it would promote a better understanding among all the concerned parties (donor agency, host government, local officials, local community) as to the future direction of project activities once external funding has ceased. Second, if the host government is committed to project continuation, authorities would have time and opportunity to prepare for their eventual takeover of project responsibilities. This would help avoid any prolonged and possibly damaging hiatus following donor withdrawal.

PROJECT DATA SHEET

1. Country: Republic of the Philippines

2. Project Title: IMPACT

3. Purpose: To develop an effective and economical delivery system of mass primary education.

4. Project Implementation:

   Implementing Agency: INNOTECH
   Started: Phase I, 1974
   Phase II, 1977
   Completed: 1980
   Mode: IDRC grant to SEAMEO

5. Project Funding:

   IDRC: $700,000*
   Host Country: Teacher salaries, office facilities

6. Evaluations:

   Numerous INNOTECH Reports
   Cost Effective Analyses, 1978
   Follow-up on IMPACT Graduates, 1981
   Numerous Evaluative Reports by External Visitors

7. Exchange Rate:

   Currency: Peso
   Exchange Rate at Time of Project: U.S.$1 = 7.6 Peso
   Current Exchange Rate: U.S.$1 = 7.9 Peso

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* IDRC grant supported IMPACT and a related project in Indonesia.

GLOSSARY

BEE--Bureau for Elementary Education

CRC--Community Resource Center

EDPITAF--Educational Development Project Implementing Task Force

ETP--Expanded Try-out Program

IA--Instructional Aide

IDRC--International Development Research Centre

IMPACT--Instructional Management by Parents, Community, and Teachers

INNOTECH--Center for Educational Innovation and Technology

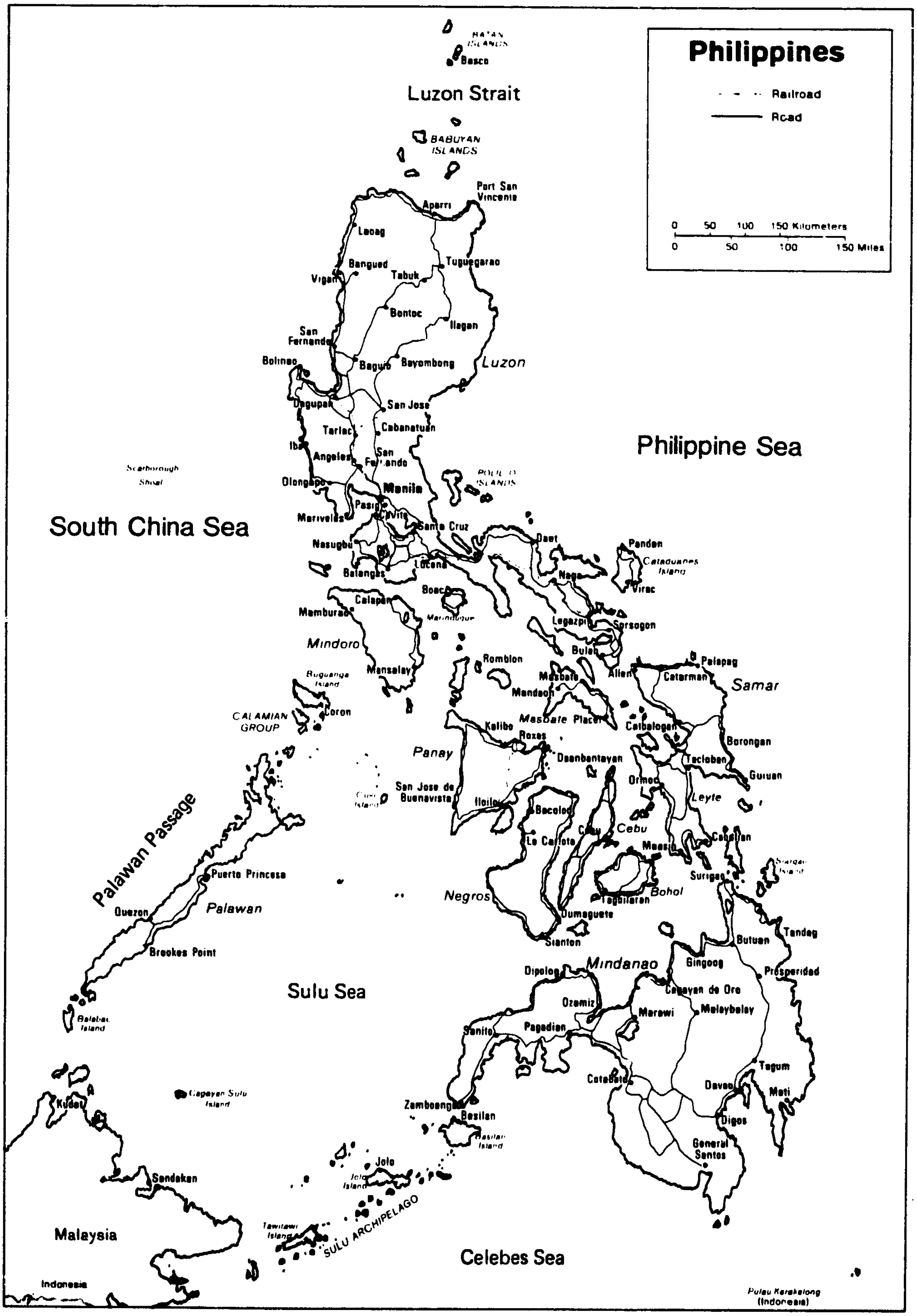
IS--Instructional Supervisor

LRC--Learning Resource Center

MEC--Ministry of Education and Culture

PT--Program Teacher

SEAMEO--Southeast Asian Ministers of Education Organization


Philippines
Railroad
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Basco
BABUYAN ISLANDS
Port San Vincente
Aparri
Laoag
Bangued
Vigan
Tabuk
Tuguegarao
Bontoc
Ilagan
San Fernando
Bolinao
Baguio
Bayombong
Luzon
Dagupan
San Jose
Tarlac
Cabanatuan
Iba
Angeles
San Fernando
Philippine Sea
Scarborough Shoal
Olongapo
Manila
Mariveles
Pasig
Cavite
South China Sea
Santa Cruz
Nasugbu
Daet
Pandan
Catanduanes Island
Batangas
Lucena
Naga
Virac
Boac
Calapan
Mamburao
Marinduque
Legazpi
Sorsogon
Mindoro
Bulan
Romblon
Palapag
Mansalay
Masbate
Allen
Catarman
Samar
Busuanga Island
Mandaon
Coron
Masbate Placer
CALAMIAN GROUP
Kalibo
Roxas
Catbalogan
Borongan
Panay
Daanbantayan
Tacloban
Guiuan
San Jose de Buenavista
Ormoc
Leyte
Iloilo
Bacolod
Cebu
Cabalian
Palawan Passage
La Carlota
Maasin
Puerto Princesa
Surigao
Siargao Island
Negros
Tagbilaran
Bohol
Quezon
Palawan
Dumaguete
Sianton
Tandag
Butuan
Brookes Point
Dipolog
Mindanao
Gingoog
Prosperidad
Sulu Sea
Cagayan de Oro
Ozamiz
Marawi
Malaybalay
Balabac Island
Sanito
Pagadian
Tagum
Cotabato
Cagayan Sulu Island
Kudat
Davao
Mati
Zamboanga
Basilan
Digos
Basilan Island
General Santos
Jolo
Sandakan
Jolo Island
SULU ARCHIPELAGO
Tawitawi Island
Malaysia
Celebes Sea
Indonesia
Pulau Karakelong (Indonesia)

I. PROJECT SETTING

The Philippines has a relatively long history of support for mass education, particularly for a developing country. Shortly after the turn of the century, the American administration of the Philippine Islands began to emphasize the education of the general populace. This emphasis brought with it an education system that was modeled on that of the United States, employing English as a general medium of instruction.

This early development of a mass education system and a continuing emphasis on education by the government following independence have produced in the Philippines one of the most highly developed educational structures in Southeast Asia. Along with its growth, the education system became widely accepted and embraced as a valued and integral part of present day Filipino society--so much so, that the education system has become one of the society's social institutions.

As in other developing countries, rapid population growth coupled with much broader socioeconomic development over the past two decades has placed tremendous pressures on the Philippines' elementary education system. Although the country has made dramatic improvements throughout the education sector, the elementary education system is still characterized by wastage, inequitable access, poor quality in many regions, and severe resource constraints.

Unfortunately, the Philippines Government is trying to solve these problems at a time when costs are becoming prohibitive and when competing demands for better services are on the rise in all sectors. Acute sensitivity to this dilemma has prompted the country to explore alternatives to the expensive teacher-oriented approaches to elementary education. The objectives of the education system were redefined in the 1970s in the context of national development objectives. Curricula were redirected to reflect new priorities. Limited decentralization was initiated to improve planning, implementation, and evaluation of education activities at regional and local levels. Several innovations in instructional methods were developed and adopted.

II. PROJECT DESCRIPTION

Project IMPACT[1] was developed and implemented by the Center for Educational Innovation and Technology (INNOTECH). INNOTECH is one of the education centers established by the Southeast Asian Ministers of Education Organization (SEAMEO) to serve the special training, research, and service needs of the member countries in the education sector.[2]

As part of its mandate from SEAMEO, INNOTECH researched and developed several proposals for providing more economic and effective elementary education, one of which was IMPACT. Project IMPACT was an experiment based on this INNOTECH proposal. With funding from the International Development Research Centre (IDRC) of Canada, Project IMPACT was begun in 1974 in the Philippines. The Philippines was selected because it was one of the two countries in the region that agreed to be a try-out site. The second was Indonesia, where the experiment was called Project PAMONG.[3]

The Project was an experiment to find an effective and economical delivery system for mass elementary education. In this experiment, the professional teacher does little direct teaching. He or she becomes an Instructional Supervisor (IS) who orchestrates a learning system for some 100 students, which is two to three times the average student load. This reduces the need for professional teachers and sharply reduces an education system's salary costs (which make up about 80 to 90 percent of total school costs).

Under the supervision of an IS, students are divided into groups of 5 to 10 learners and are taught by a Program Teacher (PT), who is one of the intermediate (Grades IV-VI) elementary students, using programmed teaching materials called

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[1] IMPACT is an acronym for Instructional Management by Parents, Community, and Teachers.

[2] SEAMEO is one of the regional organizations established with U.S. assistance in the late 1960s to promote cooperation among its member countries in science, education, and culture. Member countries are Indonesia, Philippines, Malaysia, Singapore, and Thailand. Associate member countries are Australia, France, and New Zealand. INNOTECH was established with U.S. assistance in 1970, as a research arm of SEAMEO, with a mandate to address educational problems common to member countries. Both organizations continue to thrive -- SEAMEO in Singapore and INNOTECH in Manila -- and continue to sponsor projects intended to meet the educational, research, and training needs of member countries.

[3] PAMONG is an acronym for the Indonesian equivalent of Instructional Management by Parents, Community, and Teachers.

"modules." Each printed programmed module addresses a specific learning objective and attempts to teach a number of skills at the same time. Thus, for example, a module may incorporate principles of English grammar, math, and science in a single lesson. Readiness tests and post- (module completion) tests to ensure student understanding of the subject matter are also parts of the module.

The learning process is self-directed, self-paced, and ungraded, enabling learners to proceed independently, at their own speed.[4] Parents, skilled workers, and high school and elementary school graduates all serve as community resource persons. Thus, for example, students who need assistance can get individual attention from the IS, the PT, or a community volunteer. Clerical, administrative, and logistics support is provided for the IS by an Instructional Aide (IA), who is a high school or elementary school graduate from the community.

The school itself becomes a Community Learning Center (CLC) consisting of classrooms, central learning centers where all instructional materials are kept, and open-air kiosks, where small group sessions are held under the direction of the PT. (For a more detailed description of the IMPACT system, see Appendix A.)

The Project was implemented in five schools in a cluster of rural villages on the island of Cebu, Philippines. Near the end of Phase I (1974-1976), the experiment was expanded to three additional schools in Lapu-Lapu City, Cebu, and one school in Sapang Palay, Bulacan Province. Conventional control schools were identified for each of the experimental sites. Since that time, the IMPACT system has been adopted by one additional school in Sapang Palay, and two schools in Zamboanga del Sur and Davao, Mindanao.

III. FINDINGS AND ANALYSIS

> Resistance to educational innovation is a well-documented phenomenon....An educational innovation that aims to make drastic changes in the established system must be explained and sold to all those who control, operate and use that system....[5]

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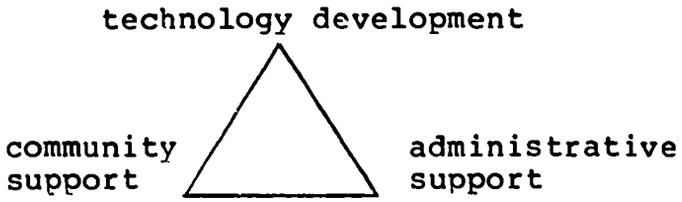
[4]In the IMPACT system traditional school grades are replaced by "levels" that identify successively higher degrees of mastery of the programmed materials.

[5]Pedro Flores, Educational Innovation in the Philippines, p. 29.

> Research however cannot be inhibited by possible reactions such as "parents are not used to this".., or "qualified teachers are going to be out of work"....[6]

To be successful, a pilot or experimental project must focus on three critical areas of concern. They are technology development, community support, and administrative support. These are mutually reinforcing, and can be represented by the following model:



At the apex of the triangle is "technology development," emphasizing the centrality of identifying the problem and conceptualizing and testing a methodology for its resolution. The bases are "community support" and "administrative support." Community support includes recognition of the way that intended beneficiaries perceive the problem and respond to the new technology. Administrative support is the system of resources (financial, human, and capital) that are necessary to sustain the new technology.

The problem addressed by IMPACT is the development of an effective and economical delivery system (technology) for mass primary education. The community support base includes recognition of the way in which the communities perceive the objectives of education, the roles of the teacher, student, and parent in education. It also includes feedback channels for assessing community responses to the IMPACT system. The administrative support base represents the broad structure of education administration, ranging from the central to the regional, local, and school levels of operation.

The following sections summarize the team's findings regarding the three elements of the model. Section A (Social Aspects) outlines the social context and discusses findings related to the community support base. Section B (Educational

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[6]SEAMEO Research Planning Document, "Setting Priorities for INNOTECH Research on the Delivery of Mass Primary Education," p.32.

Aspects) discusses findings related to technology development and the administrative support base.

A. Social Aspects

1. Education and Philippine Society

In keeping with the long tradition of mass education efforts in the Philippines, formal education is a generally recognized and valued part of Philippine society. The education system is viewed as the most common means for individuals to acquire knowledge. The gaining of knowledge itself is a valued goal, a goal that can instill wisdom. Even if an individual does not fully exploit educational opportunities, education offers training in what are considered by most as basic life-skills: literacy and fundamental math. The recognition of the essential value of these skills is widespread and reaches into the poorest segments of the population.

Education is also credited by most Filipinos with making desirable contributions to any individual's character, instilling such qualities as knowing how to relate more effectively, to other people in society, being better able to cope with life's problems, and being more able to successfully account for the events and forces in the larger world. Another valued attribute of education is that it can become a means to higher paying jobs and a greater selection of job opportunities. For example, it is believed that with more education an individual can more easily find nonmanual labor.

Related to this attribute of education is the value that education holds for social mobility. By successfully completing a series of educational levels, an individual can attain a profession which carries with it prestige and social status irrespective of the individual's origin. There are definite class distinctions in Philippine society and social rank affects an individual's participation in that society. Education is a generally available mechanism which can lead to an increase in an individual's rank.

In another context, education and the educational system have become an established institution of the Philippine society. This institution, like other social institutions, has developed a set of traditions of its own. One obvious tradition is that the educational institution has a responsibility for training the young members of the society. But, there are others. For example, schools are now centers for student

activities, both scholastic and other, which involve adult members of communities and community leaders. Teachers, as accredited representatives of the educational institution, have a relatively high status of their own and are often considered among the leaders of a community. In smaller communities particularly, schools and teachers perform a traditional role of being a source of information about outside events, current trends, innovations, and individuals with different experiences.

Part of the complex of traditions surrounding the educational institution is a set of expectations that people within the society have about the educational system. These expectations have developed over time in a direct relationship with the evolution of the conventional school system. One expectation, clearly, is to teach the young. But expectations of the educational system also extend to how the young are taught and how they learn. Thus, the expected role of a teacher includes the provision of direct guidance to the young in their learning. The teacher is expected to lead the young through the education process and be a regular source of both encouragement and discipline whenever the young may falter in the learning progression.

Two other expectations relate to the ability of the educational institution to successfully promote the young's progress through the educational system. One is that by devoting time to the educational system (i.e., by attending a school full time), an individual will learn and acquire knowledge. Related to this is the expectation that an individual will generally progress successfully through the elementary levels of the educational system according to the amount of time devoted. The standard schedule for completing one level is one school year. If an individual devotes full time to an elementary school, there is an expectation that normally the individual will successfully complete a level for each full year of attendance. The amount of knowledge gained as a standard for progression to higher levels is accepted in the abstract however, unless an individual has certain obvious limitations. The educational institution is expected to instill the "proper amount" of knowledge to a full-time student over the course of a school year.

2. Project IMPACT and the Social Institution of Education

When asked if she noted differences between a conventional elementary school and the IMPACT elementary school, Sabina replied that she had, even in her own children. Before

the school was converted to the IMPACT format, her eldest child was rather shy. After the conversion, her daughter became more outgoing as she was called upon to lead her classmates in various lessons. She also feels that her daughters learn to take more responsibility for their own learning and become more independent at tackling new subjects.

Nenita's youngest child is currently enrolled in an IMPACT school and seems to like it. Nenita, however, has doubts about the IMPACT school. Two of her older children had also been enrolled in the IMPACT school but asked their parents to transfer them to a conventional school. These older children did not like being asked to lead their peers or younger students in lessons. Other students would not follow the lessons, and Nenita's children had difficulty maintaining discipline. Her older children did not want to be in a position of trying to maintain discipline among other students. So Nenita arranged for these two children to live with her sister in a neighboring area where they could attend a conventional school.

Ignacia would like to see some changes at the IMPACT school. She thinks that, as in a conventional school, there should be a teacher assigned and responsible for each class level. With a teacher for each level, Ignacia reasons that children would receive closer and better supervision in their studies. She is concerned that without more teacher involvement, students can fall behind in their modules. Related to this concern is Ignacia's fear that by falling behind the module schedule, students may not finish the required number of modules to graduate, or at least, not finish the required number in the standard six years. (For further details, see Appendix C, "Profiles of Families with Experience in IMPACT.")

Project IMPACT, as a type of delivery system for elementary education, does not significantly change the values Filipinos attribute to education. The values for education in the Project areas remain high and are consistent with non-Project areas. IMPACT schools simply are another vehicle for achieving the valued learning already credited to elementary schools generally. In some areas, Project IMPACT seems to have modified somewhat the contributions education makes to an individual's character development. In those areas, the qualities of self-reliance, leadership, and self-confidence were perceived by parents as being more strongly encouraged in students at IMPACT schools. Parents considered these qualities as valuable additions to an individual's character.

Perhaps the most dramatic change Project IMPACT represents is in the area of expectations traditionally placed on elementary education. IMPACT schools continue to meet the expectation of providing knowledge to those individuals who attend and, for many, have a reputation for excelling in this regard. However, Project IMPACT sharply deviates from conventional social standards of student-teacher relationships. The expected role of a teacher as the primary source of learning and with the main responsibility for leading the young through the learning process is significantly altered. Student program teachers substitute in some of the traditional roles of the teacher. With the modular learning system, Project IMPACT is perceived as removing much of the responsibility for learning from the teacher and transferring it to the student.

According to the traditional expectations of an elementary school, the supervision and leadership of teachers in a child's learning process is considered by adults to be particularly important for children in the early levels, and for slower, less-motivated learners. For some parents and adults, the change Project IMPACT makes in the traditional role of the teacher violates their expectations of a teacher's participation in the education of the young.

Similarly, the change of the student's role. from the recipient of the teaching efforts of the accredited teacher to an actor responsible for completing learning modules and for teaching other students, also represents a fundamental change. This change promotes a mixed reaction among parents. Some see the role change as a way of fostering leadership and self-confidence among their children. Others perceive the role of students as teachers of other students as an unacceptable substitute for the teaching role of an accredited teacher. These parents generally consider the change a reduction in the quality of learning guidance provided to students. Quite simply, these parents believe the learning process is best served by the continual presence of an accredited teacher to guide, discipline, and encourage students. Students are not perceived by parents as possessing the skills, experience, and social status or rank necessary to effectively instill knowledge in the broad spectrum of individuals seeking an education.

Some students also have difficulty assuming the role of program teacher for other students. For these students, having to supervise and discipline peers in a class setting places them in an uncomfortable, undesirable, and at times unacceptable social position. Other students assume the role of program teacher without much social pressure or stress. Variations in attitude toward assuming the program teacher role may be due to individual differences and may be affected by

variations in community-level expressions about desirable qualities in an individual's character (or personality).

Project IMPACT also represents a change with regard to the social concept of learning through the devotion of time. The use of the modular system formally establishes the criteria for an individual's completion of a level as the completion of a number of modules (or the acquisition of knowledege). The IMPACT instructional format also permits completion of modules over differing periods of time. Therefore, the popular expectation of a temporal schedule for learning and for progression from one level to another is not directly met in an IMPACT format. This causes concern among some parents who fear that some students may fall behind the perceived temporal schedule for elementary school. Of particular concern for these parents are students who may not learn as quickly as others, especially without the direct supervision of a professional teacher. For others, the IMPACT format is perceived as an opportunity for the "fast" learner to advance through the elementary levels at a rate faster than the conventional time schedule, thus possibly circumventing the traditional temporal requirements for progressing from level to level.

3. Participation in IMPACT Schools and Popular Expectations of an Elementary Education

Aida's two children who graduated from the IMPACT school are doing satisfactorily in secondary school. She notes that their math skills developed at the IMPACT schools were very good and made secondary school math much easier for them. Nevertheless, even if the IMPACT school were restored to its original quality, Aida said she would prefer to have the IMPACT school returned to a conventional format. She feels that IMPACT schools were good only for "fast learners." Slower learners and students who lose interest quickly do not do well with the IMPACT format. Aida acknowledges that conventional schools must cope with the same characteristics in students but argues that conventional schools are better able to discipline and encourage the slower learners. When the IMPACT school first began, Aida and her neighbors were generally enthusiastic about the IMPACT experiment. Then, over time, people became disenchanted and began transferring their children to conventional schools. Aida believes that the number of parents preferring conventional schools over the IMPACT schools is increasing. She estimates that half of the households who originally sent children to the IMPACT school now prefer to send their children to conventional

schools. (For further details, see Appendix C, "Profiles of Families with Experience in IMPACT.")

Generally, there is a social expectation that children should attend school, especially at the elementary level. More well-to-do families usually send their children to private (primarily parochial) schools. This is true in Project areas and in non-Project areas. As in conventional public schools, access of children to IMPACT schools is not formally restricted by sex or socioeconomic status, and there is open enrollment.

But participation in IMPACT schools has been influenced by parents' feelings about how well the schools have met their expectations of an elementary school education. As mentioned above, the reduction of the number of teachers in an IMPACT school and the use of students to teach other students violated some parents' expectations of a "proper" elementary school environment. This departure from norms was sufficient for many of these parents to withdraw their students from IMPACT schools and transfer them to conventional schools.

Several supporters and detractors of IMPACT schools believed the IMPACT format for learning to be better suited to "fast" learners and to students whose parents had sufficient education and interest to help tutor their children. These adults expressed a fear that such students might be at a disadvantage at an IMPACT school or not progress as quickly. Some parents holding these views transferred their children to conventional schools. These parents frequently were also motivated by a concern that their children would fall behind the standard temporal schedule for progression.

The image of the IMPACT format as one particularly well-suited to the "fast" learner or the "gifted" student seems to be increasing. Impressions that parents have of Project IMPACT help to support this image, as does the popularizing of the successes of some IMPACT graduates at secondary school. One result of this growing image is that, to some, IMPACT schools are acquiring an aura of scholastic elitism which seems to discourage general participation. Again, the fear that children may not be able to keep pace with other students at the IMPACT school enters the minds of some parents. Conventional schools, although they also have students who consistently outperform others, do not appear to evoke the same fear. One reason for this less apprehensive view of the conventional school is that the role of the teacher is maintained there and this traditional role acts as something of an equalizer for the average and less-than-average student. In the traditional role, the teacher is viewed by these parents as being able to

give special assistance and encouragement to students who need it.

In several Project sites, the number of students who transferred to conventional schools actually increased over time. Part of this increase may be due to a decline in financial support for the IMPACT schools. Another reason for an increase in transfers may be the influence exerted by earlier dissatisfied parents upon others. In any case, transferring of a student to a conventional school nearly always meant a greater traveling distance and thus required greater effort by the family.

Parents with quite low levels of educational attainment and socioeconomic standing tended to have more traditional expectations of an elementary education. Consequently, student transfers and dissatisfaction with IMPACT schools seemed somewhat higher among families from the lower socioeconomic levels.

Educational administrators often expressed their belief that IMPACT schools were best suited to "more depressed" areas of the country, which were remote and more rural. Such areas also are places which usually have populations with low levels of educational attainment and lower incomes. The result of this inquiry suggests that any intentions to direct IMPACT schools primarily to more "depressed" areas should consider the efficiency of IMPACT in these areas in light of the potential for more conservative expectations of elementary education by the general population.

B. Educational Aspects

1. Cost Effectiveness

Despite these and other minor adaptations, the principal objective of Project IMPACT has been achieved. Team calculations indicate that there has been about a 60 percent reduction in the number of teachers at IMPACT schools.[7] Based on team observations and earlier analyses, there is no doubt of IMPACT's cost effectiveness. Studies done on comparative costs

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[7]The team recorded a reduction from 134 to 52 teachers. Other evaluation studies show that the number of teachers at the experimental IMPACT schools in Cebu and Bulacan was reduced from 90 to 22 from 1974 to 1979, a 76 percent reduction.

of IMPACT and conventional schools show that IMPACT schooling can cost anywhere from 16 percent to 61 percent less than conventional schooling, depending on the enrollment and the number of schools figured in the cost calculation. IMPACT can cost 54 percent to 66 percent less in salaries, plant, and equipment alone. Research studies and nationally administered achievement tests show that these savings were achieved without loss in academic quality. (See Appendix E for further details.)

These savings, however, are implicit rather than explicit, since the teachers not absorbed into the IMPACT schools are transferred to conventional schools, with their salaries intact.[8] Since salaries are financed largely by the Ministry of Education and Culture (MEC), the savings accrue to the MEC, not to the schools or local financing sources. The schools have been unable to benefit from this savings to cover the costs of converting to and maintaining IMPACT schools. Having "graduated" from the pilot/experimental phase, but still not fully integrated into the MEC's program and budget, IMPACT schools are now forced to seek other sources of support to cover these costs.[9] Conversion and maintenance costs include purchase, replacement, and updating of modules; construction and maintenance of kiosks; modification of classrooms into learning resource centers to serve as repositories for learning materials; purchase of instructional materials; and provision of honoraria for IAs (about 100 Pesos per month per IA).

Labor and some supplies and construction materials are donated by the communities. Local school boards and parent-teacher associations also make limited donations. Several costs, however, go unmet, such as IA honoraria and module replacement.

2. Teacher/Administrator Perceptions of the IMPACT System

When IMPACT was first introduced, there was vocal opposition from some teachers and administrators. Now that the

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[8] Ceteris paribus, explicit savings would be generated in the longer run as more IMPACT schools are established and, through attrition or other means, as the number of salaried teachers is reduced.

[9] MEC still funds teacher and principal salaries for IMPACT schools, but not module replacement or other costs directly related to the IMPACT delivery system.

system has been tried and found to be workable, most IMPACT school teachers agree that the system has advantages over conventional schooling.

Teacher and administrator comments about the relative academic achievement of IMPACT and non-IMPACT children support the conclusion of actual study results.[10] There is little difference between the level of academic achievement of the two groups. At the same time, however, there appears to be a perceived difference in the social development of the two groups of children. Some argue that IMPACT students, possibly because of the program teacher role, become more open, less shy, and more socially poised than their conventional school counterparts. In addition, possibly because they must master each module somewhat independently, IMPACT school children tend to gain a greater sense of independence and become more self-reliant. Again, according to some teachers, children in IMPACT schools receive more individual attention. The program teaching and peer group learning permit larger classes to be reorganized into smaller units; the presence of tutors and IAs to assist PTs and ISs permit each child to have relatively greater access to personal help from the teaching staff. Administrators generally believe that this is particularly beneficial for the slower learners who, they contend, are less likely to be frustrated or discouraged than in a conventional setting.

Organizing IMPACT school activities involves considerably more work than would be the case in a conventional school, where a teacher manages a group of children as a unit, within the confines of a single room. This fact was cited by almost all teachers and administrators (in both IMPACT and conventional schools) as a major disadvantage to the IMPACT system. First of all, in keeping with the cost-effectiveness objectives of Project IMPACT, the IS is often required to manage a much larger number of pupils. The IS must also oversee a variety of small group learning activities, both in classrooms and kiosks, and manage the teaching/assistance functions of the network of helpers who do most of the actual teaching. This has led to complaints from both parents and teachers that younger children are inadequately taught and supervised. PTs, unlike professional teachers, are not likely to have developed the skills necessary for guiding the learning activities of the youngest pupils. Possibly in response to this problem, some IMPACT schools do not use the modular format for Grade I, preferring instead to retain a conventional approach for teaching and

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[10] See for example, "An Evaluative Study of Project IMPACT," INNOTECH, 1978; and Appendix E, Table E-3 of this report.

supervising the youngest children. Some feel that this approach provides youngsters with a better role model at very impressionable ages. One school has reduced the number of levels that each IS must manage. Instead of managing six levels, the IS manages only two levels, with no change in the total number of students per IS.

3. The Current Status of IMPACT

At the newest site in Zamboanga del Sur, Mindanao, IMPACT is thriving. The ratio of students to modules is the best of any school visited. In some classes, each child has a module, while in others, two children must share a module. The modules are still new and, therefore, intact. Kiosks are brand new, better constructed than those of other schools, and the grounds are attractively maintained.

Elsewhere, the picture is less optimistic. The principal problem is financing. The schools in Cebu, for example, have had the IMPACT system for about four to six years now. There has been no replacement of audiovisual equipment, modules, post-tests, and destroyed or deteriorating kiosks. Since IDRC support was withdrawn, no donor or government authority has offered more than temporary or occasional support. There are no batteries for radios, and modules are badly torn and in very short supply. In some classes, as many as five or six children must share a module. Due to this shortage, children are not permitted to take modules home, and a number of teachers have had to resort to conventional teaching approaches. As a result of weather damage, kiosks have either been torn down or rendered unusable. There is a severe shortage of supplementary books and expendable materials.

In most schools, there was a shortage of IAs because of the unavailability of funds for honoraria. One school in Bulacan had no IAs, but simply retained a few teachers to serve as Assistant Instructional Supervisors, who essentially performed the role of an IA. Another school, unable to afford IAs, expanded the duties of the IS to incorporate the clerical and administrative functions of an IA. Even with these modifications these schools were still able to attain a reduction in the number of teachers and a significant increase in the teacher/student ratio. (See Appendix E for a comparative breakdown of input costs for one Bulacan IMPACT school and its conventional counterpart.)

Enrollment

Whatever parental support existed initially appears to have declined. In all six Cebu IMPACT schools visited by the evaluation team, there has been a precipitous decline in enrollment since IMPACT was first initiated. Many parents have removed their children from the schools, sending them to alternative private institutions. This, according to teachers, has left only youngsters from the poorest families at the IMPACT schools. Pressures are increasing for a return to conventional schooling. In Bulacan Province, the situation is not as critical as in Cebu, but the problems are similar.

Adult Participation

While one of the benefits of IMPACT is supposed to be its utility for adult learners, in fact, few adults have availed themselves of the opportunity. Some IMPACT and conventional schools do operate nonformal education classes for out-of-school adults in literacy, dressmaking, tailoring, cosmetology, and food preservation. Adults take these courses for various reasons and, in some cases, they have gained real economic benefits. A number of women learned to sew and keep foods in ways that helped save on family income. Several also found gainful employment using skills acquired in the nonformal classes.

Dropout Experience

The dropout problem, while common to both IMPACT and conventional schools, was not perceived to be a significant argument favoring IMPACT.[11] This was true among teachers and administrators at both types of schools. All teachers and administrators in the rural schools visited said that some children do drop out for varying periods of time, especially the boys. Children are expected to lend a hand during planting and harvesting seasons, both at home and in the fields. In addition, families are often plagued with health or financial

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[11] In principle, the term "dropout" does not apply to the IMPACT system since students are merely "on leave." For exposition, however, we apply the term "dropout" to those students who are absent from school.

problems which often force parents to keep children at home, either to help supplement family income or to help care for sick family members. IMPACT teachers did say that such children can pick up where they left off upon their return. Although in the conventional system the returning child would have to join in at whatever point the class was at in the curricula, whether or not he or she had mastered the materials, the academic readjustment involved is apparently not much of a problem. In either type of schooling, dropping out and transferring to other schools (which is more common in urban areas than dropping out) are so commonly accepted and understood that teachers have become accustomed to reorienting youngsters back into a classroom routine following long absences.

Local Official Commitment

Given the lack of relative advantage of the IMPACT system to the local school and its immediate community, there is no compelling felt need to fully commit local resources to maintain IMPACT.

Originally, at least at some sites, local school officials maintained their distance from Project IMPACT activities. They regularly inspected IMPACT schools under their jurisdiction, but were not routinely informed or consulted on operational matters. Some local officials feel they have now been left "holding the bag." No longer enjoying donor support, IMPACT schools must now rely on already hard-pressed local authorities for what is at best only modest financial assistance. Administrators must now request school boards and mayors to help pay for the honoraria for IAs and module replacement costs.

There is considerable doubt as to how long this can continue. There is a pervading sense that an innovation that does not provide any particular advantage to the local area, that cannot provide the requisite equipment, and that cannot be fully supported should be ended.

4. Where Does Project IMPACT Go From Here?

Much to the credit of IDRC, INNOTECH, and MEC, a good deal of thought was given to the question of Project IMPACT's future before its pilot phase ended in 1980. Three seminars were held in 1979-1980 to involve regional and local officials in developing a plan for an Expanded Tryout Program (ETP), under the general supervision of the Educational Development Project

Implementating Task Force (EDPITAF). To date, however, the number of schools converted to IMPACT under the ETP is considerably smaller than anticipated, principally due to the unavailability of funds to cover conversion costs. There now appears to be a period of indecision as to what concrete direction local officials ought to follow. Operating with very limited budgets since the Project terminated, school officials anxiously await a MEC decision regarding expanded support, both for the pilot and the ETP schools. They are hopeful that an evaluation by MEC will establish the basis for greater financial support. It is not clear when such an evaluation might be conducted.[12]

Will there ever be a time when the IMPACT system replaces or significantly augments the conventional system? Most teachers and administrators do not believe this will ever come to pass. IMPACT has already demonstrated its utility in areas where teachers are in short supply. According to teachers and administrators, IMPACT is not needed in urban areas where the number of teachers is adequate, but rather in rural, poor, and remote areas where teachers are often unwilling to work. Of course, if enrollment in teacher training continues to decline (as is projected), there may be a need in the future for more widespread utilization of a system like IMPACT, not only in remote areas but in urban areas as well.

Some high school teachers and administrators argued that IMPACT or a modification thereof might work better at the high school level, among more mature students. In fact, such a tryout is about to be initiated in Kalinga-Apayao Province in Northern Luzon. If the effort is successful, it would widen even further the potential attractiveness of the IMPACT system.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Project IMPACT is an innovation within the education system itself. As such, its major significance for change and

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[12]The problem of continued funding for IMPACT may be eased by the recent World Bank loan (U.S.$100 million) intended to improve elementary education throughout the Philippines. According to MEC/EDPITAF officials, an unspecified amount will go to IMPACT schools.

effect lies within the education institution. IMPACT did not change the way people valued or used elementary education. However, its mode of transmitting knowledge appeared at times to violate people's socially conditioned expectations of an elementary education. Because of this, popular acceptance of IMPACT was not unanimous. Referring to the model in Section III for a successful pilot project, we conclude that primary attention was devoted to the development of a technology with insufficient attention being devoted to the critical groups who would use and later administer this technology.

Regarding technology development, the Project did demonstrate that the IMPACT system can achieve cost effectiveness without loss of academic quality. In this sense, the Project was a decided success and clearly showed that the IMPACT system, properly adapted, can be a viable alternative for countries that do not have enough teachers and that seek a less expensive approach to universal primary education.[13]

Regarding community support, centralized planning for IMPACT emphasized that the Project should develop methodologies for addressing centrally recognized and macro-oriented needs (such as reducing the costs of a national education program). These needs are not necessarily those perceived at the community or user level. Some of the difficulties which have been encountered in the IMPACT experience, particularly with respect to popular acceptance, might have been lessened had community perspectives been incorporated at the planning stage.

Regarding educational administrative support, the savings realized on salaries accrue to the national level of government, not to the IMPACT schools. Since the withdrawal of external donor support, the schools have had no regular source of funding and have been unable to cover costs of personnel, equipment, and supplies. This situation has led to declining support among parents, teachers, and administrators, and has slowed implementation of ETP.

If the MEC is interested in assessing the value of the IMPACT system for possible adoption on an expanded scale, it must find a way to translate some of the savings it realizes on salaries into a fund that will permit local IMPACT schools to finance their operations.

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[13]The Improved Efficiency of Learning Project in Liberia is an example of a successful adaptation of the IMPACT system.

The team encourages continued analysis of the IMPACT experience by the MEC, in whose domain the activity now lies, and by external agencies interested in addressing the problems of universal primary education in the developing world.

B. Policy Recommendations

Without a doubt, developing nations today face a dilemma in the education sector. Almost all of them have shown a strong commitment to increasing access to educational opportunity to all their peoples. At the same time, these nations are less and less able to shoulder the increasingly heavy financial burden which such a commitment entails. Thus, despite the enormous gains over the past 20 years, the goal of universal primary education remains elusive. Almost one-third of primary school-aged children in developing countries are not enrolled. In fact, the number of children aged 6 to 11 who were not enrolled grew by 11 million between 1960 and 1975, and the number is expected to continue to increase throughout the 1980s.[14]

A system like IMPACT that has demonstrated cost effectiveness without loss in academic quality has potential utility for countries that find themselves faced with rising education costs, a shortage of teachers, and a burgeoning primary school-aged population. As one of the very few demonstrably viable solutions to this dilemma, IMPACT deserves support from the donor community--both for replication in other settings as well as for continued evaluation of its effectiveness and impact.

At the same time, results of the team's investigation into the Philippines Project IMPACT suggest that some specific requirements must accompany donor support to an experimental project in order to give the effort the best possible chance for continuing success. This is particularly true of an experiment that represents a considerable departure from popular expectations of what an academic education should do for the young.

The issues of maintenance and in-country replication following donor withdrawal must be initially addressed during the design phase of a project, and periodically reviewed during the course of implementation. As part of this exercise, the project design should include a plan--approved by the host

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[14]"Education Sector Policy Paper," Word Bank, 1980.

government--for the gradual replacement of donor assistance with host country/local resource support.

This process of articulation and periodic re-evaluation would serve several purposes. First, it would promote a better understanding among all the concerned parties (donor agency, host government, local officials, local community) as to the future direction of project activities once external funding has ceased. Thus, if a host government agrees to permit an experimental effort to be tested in-country with no further offer of continued support, this fact and its implications can (and should) be made clear from the very start to affected local officials and communities.

Second, if the host government is committed to project continuation, authorities would have time and opportunity to prepare for their eventual takeover of project responsibilities. This would help avoid any prolonged and possibly damaging hiatus following donor withdrawal.

APPENDIX A

THE COMPONENTS OF IMPACT

from

The Third Annual Progress Report

Naga Project Staff

THE COMPONENTS OF IMPACT

Since June, 1976, Project IMPACT-Naga has been operating as a complete delivery system for primary education on the developmental-experimental level. As conceived it has the following basic features:

A. Its Organizational Structure

1. Family Grouping. The entire school population is divided into families. Each family is basically composed of 10 Level 1 pupils; 10 Level 2; 10 Level 3; 6 Level 4; 6 Level 5; and 6 Level 6 pupils. The six Level 4 pupils take turns in taking care of ten Level 2 pupils; the six Level 5 pupils take turns in taking care of ten Level 3 pupils; and the six Level 6 pupils take turns in taking care of ten Level 1 pupils. The family chooses one elder pupil to serve as the family leader, aunt or uncle. One IS (Instructional Supervisor) handles 2 to 4 families, depending on the total enrollment for the school but he/she does not handle more than 200 multi-level pupils ranging from 1 to 6.

2. Non-Graded Continuous Progress. Project IMPACT does away with the vertical structure of the lock-step system. Each child progresses at his own rate over a continuum of knowledge, skills, and attitudes.

3. Mastery learning is the ultimate target of every learning task. No child may progress to the next task unless he has shown mastery of the objectives of the task. Mastery is shown by the child's performance in the evaluation exercise at the completion of each sub-task, task, and block of tasks. Mastery is at least 80% of the criterion.

4. The Management of Learning. Project IMPACT is not concerned with teaching but with learning. Therefore, before each child begins with what he is expected to study, he is first taught how to learn. This is referred to as learning how to learn. The management of the pupils' activities is shared by parents, community resource persons, and teachers.

a. The Instructional Supervisor (IS)

Due to her changed role in the management of learning, the teacher has been called the instructional supervisor. She is the only professionally trained teacher who supervises and facilitates the learning

activities of not more than 200 multi-level pupils. Her duties are the following:

(1) To teach children how to learn at the start of classes;

(2) To keep records of pupils' progress and other pertinent data with the assistance of IS Aide;

(3) To monitor the activities of the Instructional Aide;

(4) To diagnose pupils' weaknesses and to give remedial assistance to the same or to assign tutors to help the learner;

(5) To monitor, manage, and facilitate pupils' activities in programmed teaching and programmed learning;

(6) To tap community resources to enrich pupils' learning experience;

(7) To establish closer relations between the school, the parents, and the community through meetings and/or letters;

(8) To establish closer relations with other school officials;

(9) To supervise the maintenance of cleanliness within the school premises;

(10) To keep records and make regular inventory of all instructional materials delivered to the Learning Center;

(11) To keep custody of all property at the Learning Center.

b. The School Supervisor (Education Analyst)

The role of school supervisor has now been carried out by the Education Analyst. He takes care of the supervision of all the five schools. His duties include the following:

(1) To oversee the implementation of the project in all the five schools;

(2) To provide assistance to the ISs in their different duties at the Learning Center;

(3) To apprise the Project Director and the subject specialists of the problems arising from the field and to suggest remedies for these problems;

(4) To be responsible for the supervision of the ISs and to prepare the ISs' performance ratings;

(5) To hold conferences with the ISs on problems and needs of both the ISs and the pupils;

(6) To provide necessary in-service sessions to the ISs. As envisioned in this system, the role of the Education Analyst is taken over by the District Supervisor in the implementation phase.

c. The Rural Coordinator

The rural coordinator used to be called the head teacher or the principal. His/her duties in IMPACT are the following:

(1) To oversee the upkeep of the physical plant of the Learning Center;

(2) To provide orientation programs for parents in cooperation with the ISs;

(3) To solicit equipment and facilities for the Learning Center from community resources;

(4) To assist the ISs in the orientation of tutors and programmed teachers;

(5) To coordinate with the ISs and the Education Analyst on the activities and problems at the Learning Center;

(6) To be responsible for the requisition and distribution of instructional materials to the Learning Centers;

(7) To help the ISs make follow-up of pupils' absences;

(8) To inform parents of the problems and needs of their children.

d. Parents and Community Resources

Community assistance in the management of learning comes in the following forms:

(1) High school students serving as tutors; high school students in the neighboring secondary schools are assigned specific days to report to the Learning Center. In order to minimize these students' absences from their own classes, each high school student is assigned one day each month at the Learning Center. In return for this service he is given credits for his YCAP (Youth Civic Action Program). He is unpaid.

(2) Parents, relatives and neighbors serve as home tutors to their children. Children, especially the slow learners, are given home assignments which they work on with the help of their parents, relatives or neighbors.

(3) Community volunteers serving as Instructional Aides are usually elementary school graduates who have time to give to the project. A minimum stipend or honorarium is paid. The duties of the Instructional Aide are:

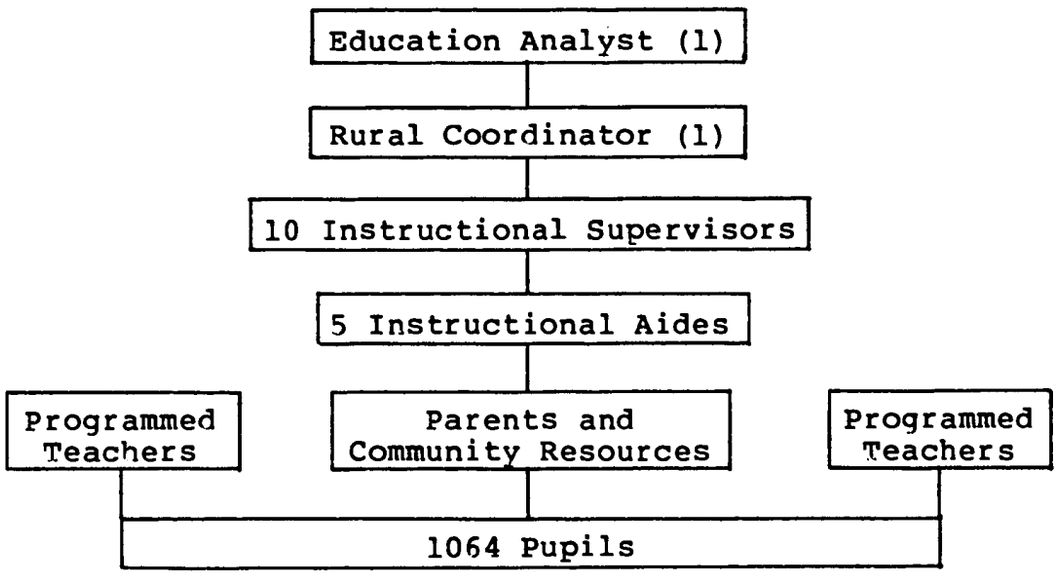
- To assist the ISs in their record keeping;
- To assist in the remediation of slow learners;
- To assist the ISs in other ways at the CLC.

(4) Community members with specialized skills: farmers, dressmakers, carpenters, and other community members with special skills serve as resource persons in the pupils' learning activities. Index cards of community resources are kept at the CLC to guide children whenever they need these resources.

(5) Elder pupils serving as programmed teachers. As mentioned in the organizational structure of the system, elder pupils are assigned responsibilities in programmed teaching. Each

elder pupil takes care of a group one hour each day. To enable him to program teach he is given no less than a 2-week training at the start of classes on how to teach. Then he spends one hour every afternoon preparing himself for the lesson he is to teach next day by studying the programmed lesson.

Here is the Table of Organization in the IMPACT field site at Naga on the management of learning:



It is pointed out here for the sake of comparison that prior to the IMPACT experiment the number of professionally trained people in all the five schools was 55. They were all paid the salary rates of professional teachers.

B. The Operational Model of IMPACT as a Management System

1. Learning How To Learn

For the first few days and weeks the ISs guide and show the learner how to learn a given task. This is done by:

a. Demonstrating to the class how to go through self-instruction modules;

b. Showing them the importance of the modular objective in steering their learning activity to the achievement of the terminal behavior;

c. Demonstrating to them how to use the visual devices, the reading and reference books, and the tape recorder;

d. Explaining and demonstrating the procedures for programmed teaching, self-instruction, peer learning and the small group modes.

These instructions may have to be repeated several times until all pupils have internalized the procedures.

2. Preassessment

Before a child starts with any lesson, the ISs must first determine the child's readiness for it. This is done by giving the pre-test and directing the child to the Are You Ready or Preparation portions of the self-instructional module or the programmed teaching module, respectively.

If the child shows readiness he is given his instructional material, but if he is not, he is directed to the How to Get Ready portion of the module.

3. Programmed instruction

a. Programmed teaching: A group of 6 to 8 pupils is taught by an elder pupil for one hour in each subject.

(1) Study the item program and the lesson programs (teaching programs; viz, item programs, game programs). Consult the IS on any vagueness or difficulty met or anticipated.

(2) Study item program or script while listening to the taped lesson (module) and simulate the teaching/learning situation using specified materials and visual aids and following specific instructions in the script. Study modules for specific instructions on how to conduct lessons and activities without using the cassette. Consult the IS about any vagueness in instructions or difficulties met or anticipated.

(3) Take post-test; self-evaluate performance based on (a) criteria for accuracy of discrimination and/or production of sounds and structures in language (English or Filipino), and (b) written post-tests to measure mastery of skill or content in other subject areas (reading,

math, etc.). (This step is omitted if programmed lesson uses Ellson's item program.)

(4) Report to IS for assignment to the group of pupils with whom programmed lesson will be conducted.

(5) Conduct programmed lesson (module) according to specific instructions and using all the materials and visual aids prepared for each module. If less than 80% of the group master the lesson, repeat as often as necessary. If 80% or more master the lesson, give post-test to those who are ready and give individual remediation to those who have not mastered the lesson by using the same materials.

(6) Administer the post-test or tutor pupils who are in need of individual remediation.

(7) Record pupil performance and report pupil progress to the IS.

(8) Repeat the cycle with the next module.

b. Self-instruction

For non-teacher instruction, the child goes through the following steps:

(1) Take the block pre-tests to establish the baseline.

(2) Get a module from your IS; study outdoors at a Learning Kiosk. At the end of each chunk answer the self-test. Compare your answers with the feedback on the next page. If you make mistakes undertake self-remediation by following the instructions at the end of the feedback, or by consulting your IS for help. Go through the same procedure for all the chunks in the module.

(3) If you have successfully answered all the self-checking exercises, go to the Learning Center and take the post-test.

(4) Your IS or the Aide will check your answers. If you have answered all questions correctly, you are given the signed Pupil's Progress Report to inform your parents that you

have successfully completed a module. You are also given a new module.

(5) If you have not obtained a perfect score, the IS or the Aide will give you the necessary remediation activities.

(6) After remediation, submit yourself to another post-test. Unless you pass the post-test, you can not proceed to the next module.

(7) Your success on the post-test is recorded in your individual progress chart.

(8) If you complete all the modules in a block, you are given a block review module. Then you take the block post-test.

c. Peer Learning Steps

(1) Form a group with other students who are on the same module as you are. A group may consist of 4 to 6 pupils.

(2) Choose a place for group learning, preferably one of the Learning Kiosks which are provided with benches, a loose chalkboard, and pieces of chalk.

(3) Take turns in reading the chunk to the group and in performing the activities specified in the chunks.

(4) Take turns in asking and answering questions.

(5) Use the chalk board for illustrations as you discuss your lesson.

(6) Review the lesson by taking turns in asking and answering questions.

(7) Take the post-test.

d. Small group modes (adopted from Bechtel's Individualizing Instruction and Keeping Your Sanity). Each group should not be bigger than 6 pupils nor less than 3 pupils.

(1) Brainstorming Small Group--Steps:
- Organize a group
- Choose a leader and a recorder
- Have a leader explain the rules for brainstorming: (a) no idea is ever criticized or evaluated, (b) quantity of ideas is encouraged, (c) the sillier the idea the better, (d) no one has absolute claim on an idea
- Have the teacher introduce the lesson or the problem
- The whole group offers ideas
- The recorder consolidates all the ideas generated
- The group summarizes all the ideas presented during the session

(2) Task Small Group--Steps:
- Define the task to be performed
- Determine the role of each member of your group
- Identify the resources that your group can use to accomplish the task
- Select the reporting procedures that your group may use
- Set a deadline for the completion of the task
- Gather the data you need
- Prepare a report of the task completed

(3) Workshop Small Group--Steps:
- Define the task or the work to be accomplished
- Gather the resources needed for the task
- Define the assignment of each member of your group
- Work on the task until completed
- Summarize

(4) The Inquiry Small Group--Steps:
- Organize your group
- Present the problem to the group
- Ask everyone questions related to the problem
- Formulate a hypothesis based on the questions asked and answered
- Verify the hypothesis

(5) Study Small Group--Steps:
- Select a topic or a problem
- Organize the group
- Gather information related to the topic or problem
- Discuss the information gathered and encourage everyone to participate
- Evaluate every piece of information on its relevance to the problem or topic
- Relate the facts gathered to real life situations

(6) Socratic Small Group--Steps:
- Present a controversial issue to your group
- Ask each member of the group to give his stand for or against the issue
- Ask each to define his stand or give up his stand and support another
- Evaluate the consistencies and inconsistencies of the positions presented

(7) Role Playing Small Group--Steps:
- Have your IS explain the nature of role playing to your group
- Have the group choose a topic or a situation
- Have each member choose his role to play
- Prepare for the presentation
- Present and enact the play
- Discuss and evaluate the presentation

4. Evaluation of Learning

a. Self-evaluation

After each child completes a chunk or a learning sequence, he administers a self-checking exercies which is built in the module. If he passes this test, he is directed to proceed to the next chunk; if he does not meet the criterion, he is directed to review the chunk.

b. Tutor or Aide evaluation

As soon as the child has successfully completed the four to five chunks in each module by passing all the self-tests at the end of the chunks, he presents himself for the module post-test which is administered either by the tutor or the teacher aide. If

the child passes the post-test, he is directed to take the pre-test for the next module; but if he does not, he is given remediation on those parts of the lesson which he failed to master. Remediation is given either by the tutor, the IS, or the Aide.

c. IS Evaluation

A group of four or five related modules constitutes a block. As soon as the child has completed the block he is due for a block post-test which is administered by the IS and which measures the child's mastery of all the objectives for the four or five modules. This evaluation instrument helps to insure mastery learning, and serves to check whatever attempts at cheating the pupil may have made in the self-test and in the post-test.

d. Pre-test/Post-tests

The project staff has prepared criterion-referenced tests that cover a number of modules for each subject area. Children who are in the modules covered by the tests take them at the start of the school year and at the end of the school year. The purpose of the tests is to determine the gains achieved by each learner within the school year.

5. Remediation/Tutorial Activities

If the learner does not attain the criterion on a given task, the IS determines the degree of remediation that the child should be given:

a. If the child commits one or two mistakes in the module and block module post-tests, he is given immediate remediation by the IS.

b. If his score is less than 80% but above 50% he is referred to the tutor for remediation on the particular chunk or chunks he failed to master.

c. If his score is less than 50%, his tutor is advised to assist him to study the entire module again.

The secondary student or an elder student who assists at the CLC as tutor is given proper orientation on the procedure for tutorial activity. The steps are:

a. Ask the child what his difficulty is, then repeat the question that he could not answer

b. If the pupil does not understand the question, explain what it means

c. If the pupil gives a correct answer, praise him, but if he does not, show him where to find the answer

d. If he gives the correct answer, praise him and proceed to the next item

e. Ask the question again and require him to answer

f. Keep a record of the problems of the pupils in the prescribed form and submit the accomplished form to the IS

C. The Instructional Materials

Instructional materials are very vital in the IMPACT learning activities, considering that the materials themselves have taken the place of the human teacher in achieving the desired behavior change in the learner. Project IMPACT uses the following instructional materials:

1. Programmed Teaching Modules (PTM)

These are the programmed lessons used by the programmed teachers to develop literacy and numeracy skills in beginning learners. Each package contains the content of instruction, the procedures for teaching, the worksheets, the criterion test, and the visual or real object devices. Each module usually takes one hour for learners to complete.

2. Self-Instructional Modules (SIM)

These are the programmed lessons for pupils who have acquired reading proficiency in the media of instruction. These materials, like the PTM's, are self-contained. Pupils may go through these materials independently or in small groups. It normally takes 3 to 5 hours for a child to finish one module.

3. Cassettes and Tapes

These are used more often with beginning learners to provide them the model for imitation in language lessons in English and Filipino. Each CLC is equipped with three

units of cassettes and a number of tapes for all the language lessons.

4. Science facilities, and tools and equipment for Practical Arts

Facilities for the performance modules in science are provided at the CLC. However, certain aids that can be obtained in the community do not have to be stocked at the CLC. The pupils obtain these from their immediate environment.

Like the Science facilities, some tools and equipment are provided in the CLC, but those which are available in the community are borrowed. For example, children may borrow the farmer's or the carpenter's tools, or the sewing machine and cooking utensils from parents. This practice is in keeping with IMPACT's emphasis on maximizing use of community resources.

5. Visual aids--charts, flash cards, maps, pictures, and real objects which are needed for the modules--are also stocked at the CLC.

D. The Physical Components of the CLC

The Community Learning Center has maximized the use of existing school buildings and school sites in the five barrios involved in the experiment. The CLC has the following basic parts:

1. The Learning Resource Center which houses all the materials for learning is part of the CLC. This center is divided into eight subject areas and a post-test area. To meet the needs of the project, a 3-room Marcos-type building has been used with the partitions knocked down.

2. The Family Homeroom

The remaining classrooms available in each school site are utilized as "family" homerooms where the pupils stay for individualized learning, for small group activities, and for large group activities in language and reading.

3. Learning Kiosks

These are small huts constructed by the community for pupils' use during their programmed teaching activities. These kiosks are set apart from each other to minimize disturbance as activities are carried on simultaneously in several kiosks.

4. A Model Garden

This area provides the children space for their projects in Practical Arts. In some Learning Centers where the garden is rather big, joint efforts are made by the community members and the pupils; that is, a farmer in the community plows the area, then he and the children form the plots, if needed, and plant them with the seedlings. The children take care of the plants from day to day. The harvest is shared by the farmer and the children.

E. System of Rewards and Incentives

1. Contracting and the Contract Progress Chart

Learners in Levels' 4 to 6 modules are expected to accomplish a contract with the IS. Through the contract the learner signifies his intention and determination to accomplish a given number of modules during the week. The IS reviews the child's proposal before both sign it, to determine if the amount of modules decided upon for completion is within the child's capacity and ability. Each child's successful completion of his contract is indicated on the contract progress chart which is conspicuously hung inside the CLC.

2. The Point System

The point system is used for beginners and for elder pupils as follows:

a. Completion of PTM or contract before schedule: red card

b. Completion of PTM or contract on schedule: blue card

c. Completion of contract one day late: yellow card

d. Completion of contract two days late: pink card

Red is given 10 points; blue, 8; yellow, 6; and pink, 4. These cards can be exchanged for commodities at the rummage sale during the IMPACT festival.

3. Comics System

Each pupil is given 3 comic books at the completion of contract before target date; two comics are given for completion on time; and 1 comic book is given if contract is completed no more than 2 days late.

4. Any child who finishes four contracts on time in succession is given a star opposite his name on the Contract Progress Chart.

5. Completion of a module entitles the learner to a puzzle or drawing. Another chart will show the number of puzzles or drawings completed by each child.

APPENDIX B

METHODOLOGY

METHODOLOGY

Aside from written materials on the Project, the team sought to generate some information of its own directly from Project sites. Several groups of people were identified as potentially possessing valuable perspectives concerning IMPACT. Each group, it was felt, could have different experiences and could have different interests with regard to the Project. Therefore, these groups became respondent groups for which a list of questions was prepared. A list of these respondent groups follows:

-- Elementary school administrators
-- Elementary school teachers (both IMPACT and conventional schools)
-- High school administrators, counselors, and teachers
-- Barangay (community) officials
-- Parents

The list of questions for each respondent group is contained in this Appendix. It should be kept in mind that the list of questions for each group illustrates a standard set of subjects on which team members wished to elicit information from each respondent in a respondent group. However, the team was not restricted to these questions alone. Interviews with respondents were also flexible enough to pursue additional subjects or to pursue the included subjects in greater depth, depending on the experience and interest of the respondent. A conscious effort was made to use as many open-ended questions as possible to try to avoid biasing the conclusions or answers of respondents.

Over 80 parents, teachers, administrators, and local education and/or political officials were interviewed at Project sites. Due to limited time and resources, the team did not apply sample survey techniques to control for respondent characteristics. The usual procedure was for team members to interview available individuals at each site who knew about, or were connected with, Project IMPACT schools in the area. While IMPACT and conventional elementary school and high school students were among those interviewed, they were not as satisfactory a source of information as adults. Some students did not know enough English to answer questions asked by team members. (What translation assistance was available was used for interviews with parents.) Other students, possibly intimidated by an interview situation with an outsider and a foreigner, seemed reluctant to give complete or spontaneous responses. The results of our interviews with students are therefore suspect and not included in this report.

In addition to the listed respondent groups, the team also talked with USAID/Manila staff, MEC officials, INNOTECH staff, EDPITAF personnel, planners originally involved with the conceptualization of the Project, and persons who reviewed the Project at IDRC at the time of that organization's decision to provide funds for IMPACT.

The selection of which Project sites to include in our study was of serious concern to the team. We decided it was important to sample a series of sites with the following characteristics:

-- Predominantly rural areas
-- Predominantly urban areas
-- Recently established IMPACT schools (expanded try-out schools)
-- Originally established IMPACT pilot schools
-- Non-Project (control) or conventional schools in the same areas

The team believed such a range of sites would provide examples of variation in circumstances and experiences with the Project. The sites visited are located in the provinces of Bulacan, Cebu, and Zamboanga del Sur.

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL ADMINISTRATORS

Name
Position
Location
Sex

1. How long have you been in your present position?

2. How long have you been in school administration?

3. In your opinion, what are the major differences between an IMPACT school and a conventional school?

4. Do you see any specific advantages in IMPACT schools over conventional schools?

    a) If yes, in what ways?

    b) If no, why?

5. Do you feel there are specific disadvantages to an IMPACT school?

    a) If yes, what are they?

6. In your experience, is there a difference in educational performance between students in an IMPACT school versus a conventional school?

    a) If yes, in what ways?

7. To your knowledge, is there a difference in the number of dropouts between an IMPACT school and a conventional school?

    a) If yes, why and in what ways?

8. How have the teachers in your area of responsibility reacted to IMPACT schools and their methods of instruction?

9. Has there been resistance to IMPACT schools or the IMPACT system among teachers?

    a) If yes, why or what was the basis of the resistance?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL ADMINISTRATORS (cont'd)

b) If yes, has the level of resistance changed?

c) If yes to (b), how?

10. How have parents of children enrolled in IMPACT schools reacted to IMPACT schools?

11. Has there been resistance to IMPACT schools or the IMPACT system among parents?

a) If yes, why or what was the basis of the resistance?

b) If yes, has the level of resistance changed?

c) If yes to (b), how?

12. Is there a need for more IMPACT schools in your area?

a) Why?

13. In your experience, has the cost of operating an IMPACT school been different from the cost of operating a comparatively sized conventional school?

a) If yes, in what ways?

14. Was there much expensive construction in converting to IMPACT?

a) Who paid for it?

15. Were there many other new costs to convert to IMPACT?

a) Who paid for the new costs?

16. Is the cost to parents of an IMPACT school more than for conventional school?

a) If so, in what ways?

17. Pilot studies show that per student costs are lower in IMPACT schools than in conventional schools. What happens or should happen to these savings in cost?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL ADMINISTRATORS (cont'd)

18. Where does the money for elementary education come from?

    a) What percent comes from the MEC?

    b) What percent comes from local sources?

    c) Who decides how the money is allocated at the local level?

19. What do you think the future holds for IMPACT schools or the IMPACT teaching system in your area 5-10 years from now?

    a) What will be the effect on the role of teachers or the teaching profession?

    b) What will be the effect on students?

    c) What will be the effect on elementary education?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL TEACHERS

Name
Age
Sex
Location

1. Where did you receive your teacher's training? In what type of school?

2. How many years have you been teaching?

3. How long have you been teaching at this school?

4. Did you teach at another school before this one?

    a) If yes, was it an IMPACT school?

5. If no to 4(a), in comparing previous school with this IMPACT school:

    a) What are major differences?

    b) Is your role as teacher different? If yes to (a), in what ways?

    c) Do you still consider yourself a teacher?

    d) Is there a difference in the performance of students? If yes, in what ways?

    e) Is there a difference in the number of dropouts between this school and your previous one? If yes, why and how?

6. Do you see any advantages of the IMPACT school over conventional schools?

    a) If yes, what are they?

7. Do you see disadvantages in the IMPACT school when compared to the conventional school?

    a) If yes, what are they? Why do they exist?

8. In your experience, have the parents of students attending IMPACT schools been generally satisfied with the schooling their children are receiving?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL TEACHERS (cont'd)

a) If yes, what, if any, features of the IMPACT school have been received particularly well by parents?

b) If no, why have they been dissatisfied?

9. When the IMPACT schools began, how did parents react?

a) Were they enthusiastic about sending their children to the IMPACT school?

b) If yes to (a), why or in what way?

c) Were any of the parents apprehensive about the IMPACT school?

d) If yes to (c), why or in what way?

10. Do you think IMPACT schools offer benefits to the families in the area that a conventional school would not?

a) If yes, in what ways?

b) If no, why?

11. What effect, if any, do you think the IMPACT school has had on the community?

12. Can you think of ways to improve the IMPACT school and its system of teaching?

a) If yes, what are they?

13. What do you think the future holds for IMPACT schools or the IMPACT teaching system, say 5-10 years from now?

a) What will be the effect on your role as teacher and on the teaching profession?

b) Effect on students?

c) Effect on elementary education?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL TEACHERS (cont'd)

14. What do other teachers not working in an IMPACT school think about the IMPACT system?

    a) Do these other teachers see any disadvantages or advantages to IMPACT schools?

    b) If yes to (a), what are they?

15. How and why was the decision made to convert your school into an IMPACT school?

16. Did you and other teachers play any role in making that decision?

17. What happened to the other teachers who taught there before the IMPACT school?

18. How and why were you selected to become an Instructional Supervisor?

19. Do you work more or fewer hours a day in the IMPACT school in comparison with a conventional school?

    a) If more, has your salary increased?

20. How many students do you supervise? How many levels?

21. How many instructional aides assist you? Are they salaried?

    a) Were they employed before this became an IMPACT school?

    b) If so, what kind of employment?

22. Are there noticeable differences between your IMPACT students and the students you taught before IMPACT? Explain.

23. Do older students who serve as program teachers resent the added responsibility?

    a) If so, why?

24. Do parents of program teachers object to this responsibility on their children?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL TEACHERS (cont'd)

25. Do you have enough modules?

26. Do adults in the community use the modules?

    a) If yes, how many adults?

27. Do adults get program teaching to accompany their use of the modules at home?

28. Which subject areas do adults study most?

29. Why have adults expressed an interest in using modules?

30. Are dropouts also using IMPACT resources?

    a) If so, how many dropouts?

    b) If yes to 30, do they receive program teaching?

    c) If yes to 30, do they study any particular subjects?

31. Have any adults or dropouts completed elementary education since IMPACT was started here?

32. Can adults receive education in conventional schools?

    a) If yes, how much do they pay?

33. Has IMPACT increased the number of adults that are receiving some education?

34. Do adults pay for using CLC resources?

    a) If yes, how much?

35. Do students pay more or less in IMPACT schools in comparison with conventional schools?

36. Was there much expensive construction involved in converting to IMPACT?

    a) If yes, who paid for it?

37. Where there any other costs in converting to IMPACT?

    a) If yes, who paid for them?

INTERVIEW GUIDE FOR ELEMENTARY SCHOOL TEACHERS (cont'd)

38. Do you have children in elementary school? Conventional or IMPACT?

INTERVIEW GUIDE FOR HIGH SCHOOL ADMINISTRATORS, COUNSELORS, TEACHERS

Name
Age
Sex
Location

1. Where did you receive your professional training?

2. a) What is your present position? How long?
   b) How long in your profession?
   c) Where were you educated?
   d) Have you ever worked in or with an elementary school?

3. Are you familiar with the IMPACT elementary schools in this community? Explain. If not, briefly explain.

4. If yes, what are the major differences between an IMPACT and a conventional elementary school?

5. Are you familiar with any high school students that graduated from an IMPACT elementary school?

6. Are there any major differences between IMPACT school graduates and other elementary school graduates? Explain.

7. In general, have there been any improvements recently in the elementary education system in this community?

8. Are any of these improvements a result of the IMPACT system?

9. Are there any major problems that you experience with students coming from the local elementary schools? Explain.

10. Are there opportunities to discuss these problems with the elementary school teachers?

11. Do students from any particular school have these problems?

12. Are these problems a result of the IMPACT system?

13. Could elementary school teachers do a better job in preparing students for high school? Explain.

INTERVIEW GUIDE FOR HIGH SCHOOL ADMINISTRATORS, COUNSELORS, TEACHERS (cont'd)

14. Could they do a better job in preparing terminal education for students who do not continue in school? Explain.

15. Is the IMPACT system good for communities that do not have enough teachers?

16. Do you have any children in an IMPACT school or know of parents whose children are?

    a) If yes, are there any differences between these children and others?

17. Do IMPACT teachers work harder than other elementary school teachers?

18. a) What do elementary school graduates do who do not go to high school?

    b) Are there many?

19. a) Is there a shortage of high school teachers in this community?

    b) Are the high schools overcrowded?

20. Do you think the IMPACT system would work in this high school? Explain.

FOR PRINCIPALS ONLY

21. Explain the budget process for schools in this community.

INTERVIEW GUIDE FOR BARANGAY OFFICIALS

Name
Age
Sex
Location

1. What is your position?

2. How long have you held this position?

3. Do you know about the IMPACT school?

   a) If yes, is it different from a conventional school?

   b) If yes to (a), how is it different?

4. Are you married?

   a) If yes, do you have any children?

   b) If yes to (a), how many?

      What age? What sex?

5. Where did your children attend elementary school?

6. Do you recall when the IMPACT school was first begun in your barangay?

   a) If yes, what were the reactions of the parents at the time?

   b) Were there any parents skeptical of the IMPACT school?

   c) If yes to (b), why?

7. Have reactions to the IMPACT school changed over time?

   a) If yes, how or in what ways?

   b) If yes, why did this change occur?

INTERVIEW GUIDE FOR BARANGAY OFFICIALS (cont'd)

8. Has the establishment of an IMPACT school caused any changes in the barangay

   a) If yes, what are they?

   b) If no, why not?

9. Do you know of any parents who refused and still refuse to send their children to the IMPACT school?

   a) If yes, why do they refuse?

10. If you alone could determine what type of elementary school to have in your barangay, would you prefer a conventional school or an IMPACT school?

   a) Why?

11. Would you like to see any changes in the elementary school? If yes, what?

INTERVIEW GUIDE FOR PARENTS

Location:
Name:
Age:
Sex:

Background Information

1. Where were you born?

2. Where were your parents born?

    a) Mother:

    b) Father:

3. What is your occupation?

4. What is your spouse's occupation?

5. Do you have any other source of income?

    a) If yes, what?

6. Does your spouse have any other source of income?

    a) If yes, what?

7. What do you estimate your income was last month?

    a) What was your spouse's income last month?

8. Does your or your spouse's income vary much from month to month?

    a) If yes, what would be a particularly "good" month's income?

    b) If yes, what would be a "bad" month's income?

9. What was (is) your father's occupation?

10. What did (does) your mother do?

INTERVIEW GUIDE FOR PARENTS (cont'd)

11. Do (did) your parents own any land?

    a) If yes, how much? farmland _____
    residential _____
    other _____

12. Do (did) you own any land?

    a) If yes, how much? farmland _____
    residential _____
    other _____

13. How old is your spouse?

14. How many children do you have?

    a) Child-specific information

    age
    sex
    in school
    grade
    IMPACT or conventional

15. Have you had any children who died?

    a) If yes, child-specific information

    age
    sex
    age at death
    cause of death

16. How many years of schooling have you completed?

17. How many years of schooling has your spouse completed?

18. Do your children ever help you with work or around the house?

    a) If yes, in what ways?

    b) If yes, do your children ever stay at home from school to help?

    c) If yes to (b), how long or how often do they remain at home in these incidences?

INTERVIEW GUIDE FOR PARENTS (cont'd)

19. What language did you speak in your home when you were a child?

20. What language did your spouse speak in his/her home when a child?

21. What language do you speak in your home now and with your children?

22. What is your religion?

    a) The religion of your spouse?

    b) The religion of your mother?

    c) The religion of your father?

23. Why do you think your children should attend school?

24. Are you familiar with an IMPACT school or the IMPACT schooling system?

    a) If yes, how is it different from a conventional school?

25. Has your child (children) ever attended any other school?

    a) If yes, was it a conventional school?

    b) Do you see any differences between the schools?

26. If you have had children who have attended both conventional and IMPACT schools, have you noticed any difference in the children which you credit to either school format?

    a) If so, how?

27. Do you help your child with homework (or modules)?

    a) If so, how?

    b) If so, have you learned anything while helping your child?

INTERVIEW GUIDE FOR PARENTS (cont'd)

28. Have you been satisfied with the education your child has received at the:

    a) IMPACT school?

    b) Conventional school?

    c) Why?

29. Have any of your children ever stopped attending school before completing it?

    a) If yes, why?

    b) If yes, did your child (children) return to school?

    c) If yes to (b), what did the child return to--IMPACT or conventional?

30. If you could make changes in the school, what changes would you make?

31. After having some experience with the school, would you prefer to have your child in a conventional or IMPACT school?

32. In your life, have your opportunities been affected by the type and amount of schooling you have received?

    a) If yes, why?

    b) If no, why not?

33. Do you think your children's (child's) opportunities will be affected by the schooling they have received or are receiving now?

    a) If yes, why?

    b) If no, why not?

34. What do you want your child (children) to be when he/she grows up?

35. How much does it cost to send your child to school?

APPENDIX C

PROFILES OF FAMILIES WITH EXPERIENCE IN IMPACT

PROFILES OF FAMILIES WITH EXPERIENCE IN IMPACT

The following case narratives endeavor to provide the reader with a brief profile of families that have experienced Project IMPACT. Drawn from interviews with parents, the narratives are accurate representations of each family's background, circumstances, and experience with IMPACT schools. The names of the informants are fictitious, however, in order to protect their true identities. Similarly, place of residence of the informants has been obscured to maintain anonymity.

Each parent interviewed is not represented in this collection of cases. However, those selected for inclusion here were chosen for their ability to illustrate patterns found among all the informants.

Sabina

Sabina is 40 years old and lives in Central Luzon. She was born in the Visayas (the central islands of the Philippines), as were her mother and father. Although her father was a farmer, Sabina chose to go to Manila where she and her husband lived for some time on land they occupied but did not own. They were resettled by the government in an effort to relocate urban "squatters." Sabina's husband, also from the Visayas, is 43 and works as a bus driver for a private bus company. His pay is based on a percentage of the bus's income; he earns from 350 to 700 Pesos ($40-85) a month. In her work, Sabina earns 100 Pesos a month. They have two children, both girls. One daughter is 13, the other 11. Both girls help their parents at home in the afternoon after school and on weekends. Sabina said her children assist in housekeeping, cooking, and running errands. The older girl has graduated from an IMPACT school and is now in secondary school. The younger is currently enrolled in Level Five at the same IMPACT school.

Sabina attended school through the first year of college. Her husband completed high school before stopping his education. Sabina believes education is important. In her own life, she feels that because she reached college she has had more opportunities and was better able to get a job. Education, she thinks, will give her daughters a better future, enabling them to be more independent and more able to support themselves as they get older. Because her family is poor, Sabina believes that without an education, her daughters would only be able to do manual labor. Schooling can help them get better jobs and allow her daughters to contribute to her own support as she becomes older.

Sabina recalled when the elementary school of her daughters was changed from a conventional school to an IMPACT school. At that time, officials explained the change to her satisfaction, and she had no doubts about what kind of education the IMPACT school would give her children. She kept her children enrolled and has not been disappointed. Sabina spoke with pride that her eldest daughter graduated from the IMPACT elementary school after performing very well--so well, in fact, that a private school heard of it and offered to admit her. Her daughter now attends the private school where she took top honors in a recent exam for all first-year students.

When asked if she noted differences between a conventional elementary school and the IMPACT elementary school, Sabina replied that she had, even in her own children. Before the

school was converted to the IMPACT format, her eldest child was rather shy. After the conversion, her daughter became more outgoing as she was called upon to lead her classmates in various lessons. She also feels that her daughters learn to take more responsibility for their own learning and become more independent at tackling new subjects. Sabina remembered that when she herself attended elementary school, only teachers taught the subjects and students were not encouraged to learn on their own. As a result, students in her time were generally too shy to speak before the class or others very effectively.

Sabina's eldest daughter has said she is interested in becoming a CPA. Sabina approves of this choice, but noted that her daughter's interest in prospective occupations may change over time. This doesn't worry Sabina, although she does hope her daughter will complete a college degree and become some sort of professional.

Nenita

Nenita, a 58-year old woman, was born not far from the community in which she lives. Her father was a security guard and owned a farm about 1 1/2 hectares in size. When her father became ill with cancer, her family sold the farm land to acquire the cash to cover the medical costs incurred for treatment. He died not long after the onset of the illness.

A Catholic, Nenita married her husband (who is the same age as she) when she was 21. Her husband now works for a cement firm, packaging the product. As a cement packager, he earns around 450 Pesos (about $66) a month. But if the cement plant shuts down temporarily for equipment maintenance or because of failure, he is not paid until work resumes.

Nenita and her husband own no land other than the land on which their house sits. They tend some surrounding garden land which belongs to someone else. Over their lifetime, Nenita has had 12 children whose ages range from 12 to 36. She had five years of schooling, while her husband completed six years. Her eldest child graduated from a commerce school but none of the others completed high school and a couple of her older children never completed elementary school.

Nenita belives it is important for her children to get an education so that they learn to read and write and so that they will be better able to find employment. Although she feels that her lack of education has hampered opportunities in her own life and knows that some of her ex-classmates have become doctors and lawyers, Nenita says she must be realistic about

her poverty and doubts if her younger children will ever finish high school. Nevertheless, she hopes her youngest child, a girl, will finish high school and go into business.

Nenita's youngest child is currently enrolled in an IMPACT school and seems to like it well enough. Nenita, however, has doubts about the IMPACT school. Two of her older children had also been enrolled in the IMPACT school but asked their parents to be transferred to a conventional school. These older children did not like being asked to lead their peers or younger students in lessons. Other students would not follow the lessons, and Nenita's children had difficulty maintaining discipline. Her older children did not want to be in a position of trying to keep discipline among other students. Nenita arranged for these two children to live with her sister in a neighboring area where they could attend a conventional school.

Since her youngest daughter is a relatively quick learner, Nenita said she is often called on to teach other students or lead in the learning of new subject modules. Nenita fears that this additional duty takes time away from her daughter's own studies and hampers her learning progress. Teachers, Nenita believes, should be the only ones leading students in their studies.

When the IMPACT school was first established, Nenita was one of the first parents to voice skepticism about using students as teachers. After all, she said, "it is hard enough for parents themselves to get children to do things; how could other children do what it was difficult for parents to do?" If she had the means, Nenita would rather send her youngest child to a conventional school. But the girl has been ill, and Nenita wants her daughter close to home. (The IMPACT school was the closest elementary school to her house.)

Victoria

Victoria, 27 years old, was born in the Visayas. Her father, a farmer, has been committed to a mental institution in Luzon for many years. Victoria's family moved to Luzon in order to be closer to her family. Since her father was no longer able to support the family, Victoria's mother worked as a seamstress and sold food and snacks in a roadside "tienda" (a small kiosk) consisting mainly of a small table, a stool, a glass cabinet, and sometimes a sun shade). Some time after moving to Luzon, the government relocated Victoria to a town established for urban squatters.

With the help of an older brother, Victoria began attending high school. She dropped out, however, in her third year to get married. She was 19 at the time. Victoria's husband also dropped out of school, although much earlier, after only three years of elementary school.

Her husband works as a laborer with a demolition crew in another town. At the time of the interview, however, he had not worked for the previous three weeks, nor did he have any prospects for work in the near future. Victoria helps to earn income for the family by making handicrafts (embroidering food covers, placemats, letter-holders, etc.). She once worked as an assembly line worker in a nearby shoe factory, but quit in order to care for her five children as her husband wished.

In a week when both Victoria and her husband work, they earn about 100 Pesos ($13.00). In another week, however, their combined income can be as low as 27 Pesos ($3.50). Victoria and her family help to compensate for their low income by relying on her elder brother. They live with Victoria's brother who was constructing an addition to his small house to better accommodate Victoria's growing family. Victoria's five children include three girls, ages 7, 4, and 1, and two boys, 5 and 2.

Despite their low income, Victoria and her husband dream of sending their children through high school and even to college. Victoria believes that an education is important for her children so that they can acquire knowledge and become wiser. She also notes that having been to high school herself has helped her find opportunities for work.

Victoria's oldest child is enrolled in an IMPACT school which is very close to her house. Because of the school's proximity, she did not really think about sending her child to any other school. She believes the IMPACT school is basically equivalent to the conventional elementary school she attended as a child. Judging from her child's first year in IMPACT, Victoria is satisfied with the education her girl is receiving.

Rosalia

A 41-year-old housewife, Rosalia lives with her 45-year-old husband in the village of her birth. She married her husband when she was 17. Her husband is a mason who works on various construction jobs and earns about 500 Pesos (about $63) a month. Rosalia also helps in the family's additional economic pursuit of raising goats and chickens. Every four months or so, she sells a goat for about 60 Pesos and two or three

chickens at 12 Pesos each. Rosalia and her husband own no land other than that on which their house sits.

Rosalia has six children; the eldest is 22 years old and the two youngest (twins), 12. The children, still residing with Rosalia, help tend the goats and chickens. Those still in school help only after school and do not stay home from school to help around the house. Four of her children are still in school; the oldest is in the third year of secondary school. Rosalia and her husband both completed only the second year of secondary school. Rosalia believes that a good education can help prepare her children for the future and hopes they can somehow find a way to complete a college degree.

Rosalia's younger children attended an IMPACT school but told their mother they wanted to transfer to a conventional school. At a conventional school, her children felt that there would always be teachers present to answer questions. Rosalia said she was satisfied with what her children had learned at both the IMPACT school while there and at conventional schools. Nevertheless, she preferred a conventional school over an IMPACT school for her children. One reason for her preference came from her children, who noted that at a conventional school teachers were present in each classroom to urge and encourage students to learn. An IMPACT school, Rosalia believes, is primarily good for "fast" learners or for children who are not shy. She does not classify her own children in either of these categories.

It took Rosalia some time to transfer her children to a conventional school. At first, the conventional school would not accept her children. One reason for this hesitancy to accept her children, Rosalia believed, was that the teachers at the conventional school feared that accepting the children would prompt a rush by other parents to transfer their children from the IMPACT school to the conventional school. Sending her children to a conventional school costs more than sending them to the IMPACT school. The IMPACT school is also basically free and is right next to her home. However, Rosalia now packs a lunch for her children to take to school, and they must traverse the greater distance to reach the conventional school.

When the IMPACT school was established, Rosalia did not attend the organizational meeting. But she and many other parents were willing to try the experiment and sent their children to the IMPACT school. Over time, however, Rosalia noted that several parents began to fear that slower learning children would take longer to complete schooling at an IMPACT school without the continuing attention of a full complement of teachers. As these fears mounted among parents, Rosalia

believes the enrollment at the IMPACT school began to decline. If the IMPACT school were to use a trained teacher for each level (like the conventional school does) who would be responsible for the student's progress in each level, then Rosalia would be willing to enroll her children in the IMPACT school again.

Aida

Born on a nearby island, Aida now lives with her 39-year-old husband and five children. Her husband, a tool-keeper at a nearby shipyard, earns around 800 Pesos a month (about $100). Aida's father (now deceased) was a policeman. Her mother, like herself, is a housewife. Her mother now owns 2.5 hectares of farmland devoted to coconuts. Aida completed two years of secondary school, while her husband finished the third year. Both stopped schooling to help contribute to the livelihood of their families.

All five of Aida's children are attending school now. She hopes all her children will at least finish secondary school so that they will have a better future and will have a chance at better jobs. Aida's two oldest children graduated from an IMPACT school (they were enrolled in the school when it was converted from a conventional format). A third child enrolled from the first grade at an IMPACT school, but transferred to a conventional school farther away. Aida, her husband, and the child agreed with the transfer.

The IMPACT school, Aida said, had deteriorated over time. She doubted that the students who taught other students were very effective and had heard that they were not respected by students. Students, she feels, were losing interest in the modules. Aida also believes that in art subjects, the IMPACT students were behind the conventional school students. All of these factors contributed to the decision to transfer Aida's child to a conventional school.

Aida's two children who graduated from the IMPACT school are doing satisfactorily in secondary school. She notes that their math skills developed at the IMPACT school were very good and made secondary school math much easier for them. Even so and even if the IMPACT school were restored to its original quality, Aida said she would prefer to have the IMPACT school returned to a conventional format. She feels that IMPACT schools are good only for "fast learners." Slower learners and students who lose interest quickly do not do well with the IMPACT format. Aida acknowledges that conventional schools must cope with the same characteristics in students but argues

that conventional schools (with a "full" complement of teachers) are better able to discipline and encourage the slower learners.

Some of Aida's neighbors have also transferred their children from the IMPACT school to conventional schools. She said they did so for some of the same reasons that motivated her and because they were concerned about the minimal role of professional teachers in the instruction of students.

When the IMPACT school first began, Aida and her neighbors were generally enthusiastic about the IMPACT experiment. Then, over time, people became disenchanted and began transferring their children to conventional schools. Aida believes that the number of parents preferring conventional schools over the IMPACT school is increasing. She estimates that half of the households who originally sent children to the IMPACT school now prefer to send their children to conventional schools.

Ignacia

Ignacia, the third of five children, lives with her mother. A 29-year-old widow, Ignacia helps in her mother's banana retailing business which operates out of her mother's small home. Ignacia's husband was only 25 years old when he died seven years ago. Her husband had operated a small business which folded upon his death. He left no land. Ignacia depends on her mother's business for support.

She has two children, ages 10 and 8. Both are enrolled in a nearby IMPACT school--the oldest in Level Four, the youngest in Level Two. Ignacia completed the sixth grade before stopping her education. Her husband had attained the same level of education. Ignacia believes it is important for her children to get an education so that they will be able to have more opportunities to select jobs they truly like. She dreams that both her children will complete college and become professionals; but, more realistically, she thinks she would be satisfied if her children completed secondary school. Looking back over her own life, however, Ignacia does not think her own level of education has influenced her opportunities very much.

Generally, Ignacia has been satisfied with the education her children have been receiving at the IMPACT school so far. They can read and write well and have been advancing in their studies. She has also heard from school officials that graduates from IMPACT schools usually do very well or excel at secondary schools.

Nevertheless, Ignacia would like to see some changes at the IMPACT school. She thinks that, as in a conventional school, there should be a teacher assigned and responsible for each class level. With a teacher for each level, Ignacia reasons that children would receive closer and better supervision in their studies. She is concerned that without more teacher involvement, students can fall behind in their modules, losing motivation or abusing the self-learning system.

Related to this concern is Ignacia's fear that by falling behind in the module schedule, students may not finish the required number of modules to graduate or, at least, not finish the required number in the standard six years. Ignacia knows of one child who has been in the IMPACT school for seven or eight years and has yet to finish. She knows of a few others who graduated only after being enrolled at the IMPACT school for seven to eight years. Ignacia wants very much for her children to finish elementary school and fears that the IMPACT school's standards may be too high.

Despite these concerns, Ignacia still would prefer to send her children to an IMPACT school in the future, provided that more teachers are added to the staff to approximate the teacher-student ratio of conventional schools. If this condition is not forthcoming, Ignacia's concerns will remain unresolved.

Ignacia knows of other parents who have withdrawn their children from the IMPACT school and who are now sending their children to conventional schools 3 to 5 kilometers away. These parents have said that they do not like the fact that the IMPACT school utilizes fewer professional teachers than a conventional school. Furthermore, the parents of children who have transferred to conventional schools seriously doubt the ability of children to teach other children as the IMPACT system prescribes. Ignacia believes that the number of parents who send their children to more distant schools in order to avoid the IMPACT school is increasing.

APPENDIX D

PROJECT-SPECIFIC RECOMMENDATIONS

PROJECT-SPECIFIC RECOMMENDATIONS

In his memorandum to USAID/Philippines consenting to this evaluation, His Excellency the Minister of Education and Culture (MEC) stated that " the proposed evaluation...is very timely, since its results could give the Ministry some direction in framing policy regarding...possible adoption of the IMPACT system on a wider scale as an alternative educational delivery system." All of the education officials interviewed by the team are looking forward to an MEC evaluation of the IMPACT delivery system. Local officials are hoping to receive needed support for both existing schools and planned conversions. The most immediate need is for honoraria for IAs and funds for replicating and updating modules.

The team concluded that what is desperately needed now is a clearly articulated program of action to:

1. Evaluate the first few years of ETP and assess the experience of post-project funding in pilot schools

2. If the evaluation is positive, devise an appropriate arrangement whereby the unique, unmet needs of these schools can be met, preferably within existing MEC budget resources

3. Encourage regional directors to be more resourceful and innovative in implementing this alternative delivery system where the need is perceived or apparent and where communities are receptive to it

MEC assessment of the post-project experience is critical and should form the basis for a policy decision regarding IMPACT. If the decision is positive, the team recommends that the second priority be placed on devising an appropriate system by which MEC recognizes and supports the varying degrees of economy that existing schools are realizing--an implicit economy which accrues to MEC (in terms of stretching limited budget resources further) and not to the schools. It is these schools that will continue to serve as models for other communities (and countries) to study in consideration of adopting the IMPACT delivery system. The third priority recommended by the team is to increase the authority and flexibility that regional education directors have in further implementing ETP in close cooperation with local level officials. For example, the team wonders if MEC could introduce more flexibility into its decentralized budgeting process by delegating to regional directors some control in allocating approved budget resources. Can IMPACT schools that do not receive MEC

textbooks receive a "materials and supplies fund" instead? The team suggests that perhaps with a bit more flexibility in the budgeting process, the IMPACT schools could be supported without a net increase in budget resources. Further dialogue and research are needed on this point.

The team suggests that further external funding is not needed for the IMPACT delivery system. The core research and development activity has been successfully completed. INNOTECH and IDRC can be proud of this accomplishment. Further, ETP was conceived and launched before the project terminated. This accomplishment by itself is worthy of note. We believe that few pilot projects can boast of such foresight and follow-through. Of this, MEC/EDPITAF should be proud. With the pilot project with external funding now over, MEC has the responsibility of assessing whether it should support the schools with domestic funding.

APPENDIX E

TABLES ON RELATIVE COSTS AND ACADEMIC ACHIEVEMENT, IMPACT AND CONVENTIONAL SCHOOLS

RELATIVE COSTS AND ACADEMIC ACHIEVEMENT OF IMPACT AND CONVENTIONAL SCHOOLS

Table E-1 contains data from a study by Tereso Tullao that examine per-student costs of the five original IMPACT schools in Cebu and comparable conventional schools in the same geographic area.[1]

The cost items that figured in the calculations are (1) instructional materials; (2) staff salaries, plant, and equipment; (3) central administrative costs (overhead); and (4) IDRC development costs. Once per-student costs for the Cebu school sites were determined, Tullao went on to extrapolate from his data base predictive calculations of per-student costs for IMPACT and conventional school systems that had more schools per system and more students per school.

In the case of the five Cebu IMPACT schools and their conventional counterparts, per-student costs wer calculated on the basis of 200 students per school. The results showed that IMPACT schooling was U.S.$10.18 or 16 percent cheaper per student per year than conventional schooling. In a hypothetical school system of five schools with 1,200 students per school, IMPACT would be cheaper than conventional schooling by U.S.$13.60, or 36 percent per student per year.

The savings involved become even greater as the number of schools in a system increases. Thus, for a system of 500 schools with 1,200 students per school, IMPACT is 48 percent cheaper, and 61 percent cheaper with 200 students per school.

Tullao's findings on the relative costs of staff salaries alone indicate that IMPACT schooling can produce particularly impressive cost savings. With 200 students per school, IMPACT costs 66 percent less in staff salaries per student per year. With 1,200 students, IMPACT costs 54 percent less.[2]

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[1]Tereso Tullao, Initial Cost Estimates of IMPACT Technology and Traditional Schooling, Manila, 1978.

[2]For 200 students per school, actual cost figures are U.S.$50.32 (conventional) and U.S.$17.06 (IMPACT). For 1,200 students per school, figures are U.S.$34.06 (conventional) and U.S.$15.78 (IMPACT). These figures vary with the number of students per school, but remain constant across different numbers of schools per system.

Table E-2 is taken from a cost study done by James McMaster in 1978 of an IMPACT school and a nearby comparable conventional school in Bulacan Provice.[3] According to McMaster's calculations, staff costs of the IMPACT school were 56 percent cheaper per year than for the conventional school, while the total annual cost of the IMPACT school was 50 percent cheaper than the conventional school.

Table E-3 gives the average scores on achievement tests administered in 1978 to Grades IV, V, and VI at IMPACT and conventional schools in Cebu and Bulacan.[4] A total of 2,096 students from 9 IMPACT and 7 conventional schools took the tests. Schools were matched according to local community socioeconomic characteristics, enrollment size, parents' income, and teacher qualifications. With the exception of the average reading scores for Grade V students, the results are not statistically significant (.05 level). Figures in parentheses are the numbers of children that took the particular test.

Table E-1. Annual Per-Student Cost, IMPACT (I) and Conventional (C) School (in U.S.$)

Number of Schools in the System	1,200 Students per School			200 Students per School		
	I	C	Difference	I	C	Difference
5	24.01	37.61	13.60 (36%)	54.31	64.49	10.18 (16%)
50	19.14	36.01	16.87 (47%)	23.80	53.49	29.69 (56%)
100	18.89	35.94	17.05 (47%)	21.96	52.80	30.84 (58%)
200	18.77	35.91	17.14 (48%)	21.19	52.57	31.38 (60%)
500	18.68	35.87	17.19 (48%)	20.69	52.39	31.70 (61%)

[3]James McMaster, Cost-Effectiveness Analysis of Project IMPACT for the Philippines, Manila, 1978.

[4]INNOTECH, An Evaluative Study of Project IMPACT.

Table E-2. Estimated Annual Cost of Input Requirement for a Traditional Elementary School in Comparison With an IMPACT Community Learning Centre (1,200 pupils each)

	Traditional School Input Costs (U.S.$)	IMPACT CLC Input Costs (U.S.$)
Annual Staff Costs		
Teachers' salaries ($1,234)	$43,190	$ -
Instructional supervisors' salaries ($1,234)	-	14,808
Principal's salary	2,137	-
Rural Coordinator/Education Analyst	-	2,137
IS aides honoraria ($84)	-	1,008
Specialist teachers' salaries ($1,234)	2,468	-
Itinerant teachers' salaries ($1,234)	-	2,468
Tutors (Nil)	-	-
Janitor	575	575
In-service training (IMPACT training)	110	221
Sub-Total	$48,370	$21,217
Annual Physical Facilities Costs		
Classrooms ($136)	$ 4,080	$ 2,448
Home economics building ($408)	408	408
Industrial arts building ($408)	408	408
Classroom desks ($1)	600	600
Kiosks ($3)	-	60
Long tables ($1)	10	20
Study-testing carrels ($1)	-	30
Blackboards ($2)	180	260
Teachers' desks and chairs ($4)	120	48
Office furniture for principal ($10)	10	10
Filing cabinet ($2)	2	2
Typewriter ($10)	10	10
Mimeograph machine ($60)	60	60
Bookshelves ($1)	5	5
Sub-Total	$ 5,893	$ 4,374

Table E-2. Estimated Annual Cost of Input Requirement for a Traditional Elementary School in Comparison With an IMPACT Community Learning Centre (1,200 pupils each) (cont.)

	Traditional School Input Costs (U.S.$)	IMPACT CLC Input Costs (U.S.$)
Learning Materials, Teaching Aids Costs		
Annual cost of modules (.58 per pupil)	$ -	$ 696
Text books (.68 per pupil)	816	-
References (.20 per book)	60	60
Science kit ($11)	132	-
Learning kit ($11)	-	132
Radios	2	2
Instructional arts tools ($20)	20	20
Home economics sets ($5)	25	25
Chalk, paper, charts, maps ($150)	150	150
Paper for student exercises	780	1,301
Sub-Total	$ 1,985	$ 2,396
Utilities		
Telephone, electricity, water	$ 600	$ 400
Grand-Total	$56,848	$28,387

Notes:

Cost of IMPACT CLC as % traditional school cost = 49.93%
Annual cost per pupil for non-IMPACT school = U.S.$47.37
Annual cost per pupil for IMPACT school = U.S.$23.65
Annual cost saving per pupil by transition from traditional to the IMPACT system = U.S.$23.72

Table E-3. Average Achievement Test Scores by Subject of IMPACT (I) and Conventional (C) School Students in Grades IV, V, and VI

Subject	Grade IV	Grade V	Grade VI
Language			
I	15.22 (389)	20.28 (326)	22.30 (284)
C	14.28 (349)	20.47 (373)	21.41 (335)
Reading			
I	11.15 (388)	11.34 (326)	12.25 (284)
C	11.03 (343)	10.66 (373)	12.18 (333)
Science			
I	16.64 (367)	16.81 (309)	19.20 (266)
C	16.11 (351)	16.36 (383)	18.58 (340)
Math			
I	9.16 (380)	10.65 (308)	11.74 (266)
C	9.08 (342)	10.97 (382)	12.34 (340)
Social Studies			
I	9.91 (224)	9.18 (309)	10.62 (266)
C	10.03 (229)	9.26 (383)	11.05 (340)

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Photographs

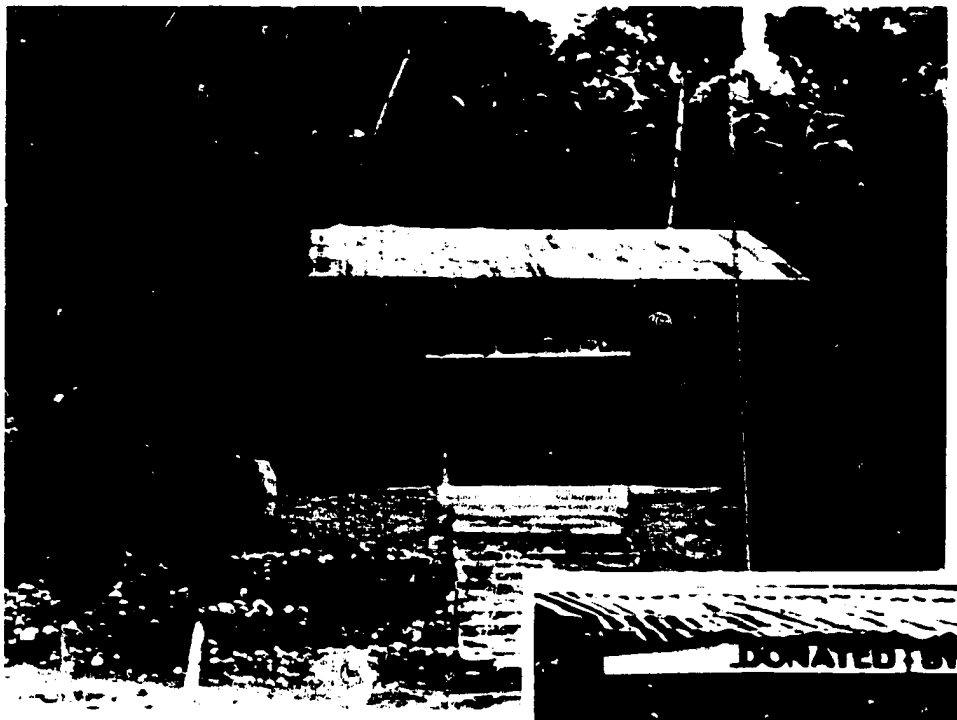
Program teaching at an IMPACT school, supervised by an IS.

Supervised group study in an IMPACT school; kiosk with thatched roof.

Recreation Period. Note the more basic construction of the kiosk.

Program teaching sessions in-doors supervised by an IS.

Self-study period.



Lutac, Cebu, IMPACT school classrooms.

Program teaching under kiosk with tin roof construction.

Community Learning Center at Sapang Palay, Bulacan Province.

Program teaching session.

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