

INSTRUCTIONAL MANAGEMENT IN IMPACT

(INSTRUCTIONAL MANAGEMENT BY PARENTS,
COMMUNITY AND TEACHERS)

by the

RESEARCH DIVISION
INNOTECH



SOUTHEAST ASIAN MINISTERS
OF EDUCATION ORGANIZATION
(SEAMEO)

REGIONAL CENTER FOR EDUCATIONAL
INNOVATION AND TECHNOLOGY
(INNOTECH)

Metro Manila, Philippines, 1979

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HISTORICAL DEVELOPMENT OF PROJECT IMPACT

Project IMPACT (an acronym for Instructional Management by Parents, Community and Teachers) was a developmental study of an instructional management system for the delivery of mass primary education. IMPACT was the response by INNOTECH to the second of four priority problems identified as critical and common to the region.* The priority problems were:

1. Development of Instructional objectives by SEAMEO member countries;
2. Development of an effective and Economical Delivery System for Mass Primary Education;
3. A study of non-formal education in the SEAMEO Regions;
4. A study of Teacher Preparation and Utilization in the SEAMEO Region.

The main objective of Project IMPACT therefore, was to determine the most economical way of organizing instructional resources into a meaningful learning system, without any sacrifice of the quality of learning.

In order to establish the focus for the research on the difficult problem of an alternative delivery system for mass primary education which must be more economical but at least just as effective as the existing systems of the region, a Regional Seminar was hosted by INNOTECH in Singapore in February, 1973. The concept of the initial delivery system developed by the seminar came under the dubious, if intriguing title "No More Schools?".

Nine months later, in November of the same year, a follow-up seminar was held in Saigon on "The Use of Community Resources in Providing Low Cost Primary Education". It was this seminar which replaced the title "No More Schools" with the forceful acronym IMPACT. And the name stuck.

*In August, 1972, the Southeast Asian Ministers of Education Organization (SEAMEO) organized a Technical Working Group composed of key educators from the eight member countries to identify priorities for SEAMEO to concentrate on in the 70's.

SOCIO-ECONOMIC POLITICAL BACKGROUND

Most Asian countries, particularly SEAMEO members have one thing in common - each experienced the painful travails of being a colony of another nation. The colonizing powers, perhaps meaning well at the time simply transferred and imposed their own educational system on their subject peoples. In fairness to all, it may honestly be said that the system laid down by the colonists were the best possible under the circumstances. Gains in the academic and professional fields were substantial and quite useful.

In time, Asian countries developed an uncontrollable restlessness. Their search for an identity and eventual political independence spawned a parallel ferment in the educational arena. Western thinking as expressed in the educational systems were an anachronism, dysfunctional, and utterly-unfitted to the oriental mind. There was urgent need to redirect the educational systems to conform with the surging aspirations and ways of thinking and acting of the Asian.

However, by the time the Asian educator was ready to take on the responsibility of managing the educational system of an independent people, formidable problems, not of his making, had developed which had direct bearing on the education of the citizen. Typical is the Philippine situation.

Foremost, of course, are the engrained school traditions, mostly westernized. Although alien to the ethnic culture, the borrowed educational system has had time to settle and be tolerated, if not accepted by those who have profited from it. On the other hand, the same system has failed to educate more than half of the population.

This failure, of course, is a function of economics. Although (in the Philippines) the proportion of the national budget devoted to education is quite substantial, more than 90% of this is earmarked for salaries alone of personnel. The amount that goes for such items as books, instructional materials, and staff development becomes insignificant.

The need for more and more teachers and other school personnel in the traditional graded structure is demanded by an unprecedented growth of the population (at one time reaching beyond 3%). In a society which values education highly, the impact of this population growth on the educational systems is tremendous. Where physical facilities are lacking,

children have simply to be turned away -- or else makeshift shelters masquerade as schools.

Unfortunately, mere love for education cannot sustain itself. In the rural areas, where 70% of the population lives, there is a constantly high drop-out rate. Again, the reasons can be traced to economics. Children are needed for the day to day struggle for survival; poor nutrition and poor health increased this desperation and inspite of its being "free", the rural family can ill afford the cost of primary education.

Thus, before a rural child can finish a six-year elementary school he drops out.

The concern for the plight of the out-of-school youth which the government had recognized as urgent has increased the problems of the formal school system. Whatever available financial resources could have been added to the formal school budget, must now be channeled for the out-of-school.

Then too, the national government is slowly but inexorably taking on the responsibility of financing public secondary schools. These are tuition schools receiving some support from the local government. On top of these, more and more state colleges and universities are being established - all demanding their share of government funds.

All in all, the sheer enormity of the problems of education is overwhelming. (and we have not even mentioned the **problems** related to the quality of education).

If the greater problem is quantitative and specifically financial, then solutions must be so directed. Project IMPACT demonstrates one such solution.

CHOOSING THE SITES

It was initially decided that the research be conducted in two member countries of SEAMEO, the Philippines and Indonesia. In the choice of the project sites the following criteria had to be satisfied:

1. The schools must be in rural villages, typical of the country.
2. Approximately 50% or less of the children in such villages are currently receiving a primary education, or that there is need to reduce educational costs;
3. The schools must be in 5 to 10 villages of different sizes within fairly close geographical proximity;
4. There be a sizable proportion of the children who do not speak the language of instruction.
5. Relatively easy access to the INNOTECH Regional Center.
6. A willingness of the villages to participate in the study.
7. Has a total primary school age population in excess of 1,000.
8. Is close to institutions (universities or colleges) from which staff and advisors can be drawn.

Consequently, the Survey Team from the INNOTECH Center chose five schools in Naga, Cebu in the villages of: Naalad, Pangdan, Lutac, Balirong, and Uling. A similar number of schools were picked out near Solo in Central Java, Indonesia.*

In Solo, the Project is called Project PAMONG which stands for: Pendidikan Anak Oleh Masyarakat, Orang Tua Dan Guru. The schools are: Kebak II, Kebak III, Alastuwo I, Alastuwo II.

This report cites mainly the experience of Project IMPACT in the Philippines.

The criteria clearly reflect the concern of SEAMEO over the large drop-out population characteristic of most rural areas. This is abetted by the language of instruction which is foreign to the school child.*

The projects of INNOTECH (and other arms of SEAMEO) are conducted in cooperation with the Ministries of Education of the member countries. For project IMPACT in the Philippines an initial conference with top level educators from the Department of Education was conducted by the INNOTECH Deputy Director (Dr. Winarno Surakhmad) and a Research Advisor (Dr. Daryl G. Nichols) in October 1973. The same key officials who attended the conference later composed the national steering committee for Project IMPACT, with the undersecretary of the Department of Education (Dr. Narciso Albarracin) as Chairman. Members were: The Director of the Bureau of Public Schools (Dr. Liceria Brillantes Soriano), the Director of Region VII (Dr. Aurelio Tiro) and the President of the Philippine Normal College (Dr. Bonifacio Sibayan). The office of the Regional Director was also designated as the coordinating agency since the project sites were in that region.

It was the National Steering Committee and the representatives of INNOTECH which finally made the decision on the project site, and appointed the Project Director.

The same set of criteria will no longer be appropriate for implementing within the conventional system, if only for the fact that as a result of the application of the criteria, the five schools of Naga happen to be under two school districts. This is also true of the three schools in Lapu-Lapu City. If it were not an experimental situation, during which the project directors were allowed full control over the schools, there would have been serious conflicts over supervisory responsibility. It should be assumed that success will be more certain if supervisory responsibility is well defined.

For one thing there is no hard fast rule as to the initial size of a school for maximum efficiency. In the final analysis, the choice of a school may depend on only one of several factors

The three sites in the Philippines have schools of varying sizes.

From November 12 to December 15, 1973, the Project Director and her Associates, met with the INNOTECH Center Staff* to plan out the Research activities in detail, based on a tentative schedule developed by the INNOTECH staff.

Actual work on the components of Project IMPACT started in January of 1974. For five months module writers were trained and the modules for the first semester for Grade IV were produced. It was in Grade IV that modular instruction, as the norm of IMPACT, was started.

Module writers were subject matter specialists recruited from the school system and assigned full time for the purpose. It was envisioned that if Project IMPACT were to be adopted by an entire system, or sub-system, the preparation of materials was to be accomplished by a similar body of writers.

For the purpose of the experiment, it was also decided to base the modules on the learning continuum followed by the school system.

With the preparation of the basic materials, the modules, all the other components of Project IMPACT were field tested in the school year June 1974 - March 1975.

*In Saigon, the original site of INNOTECH

THE COMMUNITY LEARNING CENTER (CLC) CONCEPT,

Project IMPACT deliberately offers its school doors to the community. At the same time it reaches out and seeks knowledge from the community. In IMPACT parlance, the entire community is a learning center where there can be variety of learning venues; where there are unlimited available resources for learning.

In IMPACT, therefore, the school has been named a "community learning center," or CLC. The term, community learning center, is therefore used in two contexts: as a concept, and as a structure.

Conceptually, the term CLC may be considered either a logical consequence of; or one that gives rise to the term IMPACT. The sequence is immaterial. What is important is that the IMPACT CLC maximizes the use of the formal school structure, making it the hub of all learning activities for the whole community - for the young and the old alike. At the same time; parents and community members accept and exercise active roles in the learning of the child.

Furthermore, and most important perhaps, the CLC concept has the potential of entirely eliminating or at least minimizing school dropouts and out-of-school youths, through the provision of learning posts, itinerant teachers, and the other components of the instructional delivery system.

Structurally, the CLC is a learning resource center from where the children can obtain their instructional needs, such as modules, and others. These learning centers were furnished and equipped in order to make them more evocative and stimulating environments, thus contributing to the well-rounded development of the students.

In view of the nature of the learning modes the original school buildings were slightly remodeled. A multi purpose area was created by knocking off a wall between two adjacent rooms. This was made a library and storage area for modules, visual devices, post tests and pupil records, as well as a testing and study room. The multi purpose area has a potential for containing materials for the adult members of the community.

For small group learning, additional space was made by the construction of temporary shades or kiosks. Otherwise, group activities may be held in any shady place.

An example of the learning center as a product of cooperative endeavors is the Sapang Palay CLC. The school buildings were originally constructed through the joint efforts of the Philippine and the United States governments. The site was donated by the National Housing Authority. The furniture and equipment were provided by the Department of Education and Culture.

With extension of Project IMPACT to the Bagong Buhay* F Elementary School, the different segments of the community joined hands to improve the school further. Governor Ignacio Santiago of Bulacan gave P10,000.00 which was spent for additional furniture and equipment in the office and multi-purpose room. Mayor Jose A. Guballa of the town of San Jose donated materials for the construction of Learning Kiosks. The Ministry of Local Government and Community Development officer and the Barangay Chairman put up permanent Learning Kiosks. The parents for their part provided free labor in the construction of kiosks, nursery, and in beautifying the school site. Later, the Deputy Minister for Non-Formal Education, and the Regional Directors of the Ministry of Education and Culture contributed three more kiosks. A clinic was put up in the school site by the personnel of the Ministry of Public Works.

The dream of putting up a center that is in consonance with the IMPACT programme of total community involvement became a reality.

*Bagong Buhay means "new life".

CLC PERSONNEL OF IMPACT

The school personnel described below are from the actual experience of the three IMPACT sites in the Philippines - Naga, Cebu, Lapu-Lapu City and Sapang Palay, San Jose, Bulacan. Excluded is the curriculum writing staff and the Project Director. The sites have varying characteristics as shown in the following table:

Site	No of Schools LC's	Pop. per		P E R S O N N E L					
		School	Total	F.C.	I.C.	I.S.	I.S. Aide		
Cebu	5	(1978)							
Naalad		169		}	}	2	1		
Lutac		140				2	1		
Uling		148				1	1		
Balirong		159					2	1	
Pangdan		218	834						
Lapu-Lapu	3								
Gun-ob		395	300	}	}	4	4		
Babag		286	316			1	1	4	4
Mactan Air Base		422	313					4	4
			1103						
Sapang Palay	1								
Bagong Buhay F Elem. School		1,284	1,284			1	12		
						12	12		

The IMPACT Field Coordinator(IFC)

The IFC corresponds to the District Supervisor of the conventional system. However, the IFC performs rather different functions and have likewise role expectations unlike those of the District Supervisor.

Only Naga has an IFC. For Lapu-Lapu and Sanang Palay, the functions of the IFC are performed by the Project Director.

The Instructional Coordinator (IC)

He corresponds to the principal in the conventional system. Just like the IFC, the I.C. has different roles from his counterpart.

Although the 5 schools in Naga and the 3 in Lapu-Lapu have only one I.C. each, as stipulated in the original plan, INNOTECH is inclined to recommend that each CLC should have one Instructional Coordinator, especially for larger CLC's.

The Instructional Supervisor (I.S.)

The I.S. performs the role of the classroom teacher. Her "classroom" however, is different from that of the conventional teacher in that she handles pupils of every grade.

The I.S. Aide

Assisting the I.S. is a non-professionally trained aide. The aide should at least be an elementary school graduate. Theoretically, the aide is a volunteer, but receives a nominal compensation.

It is best if every I.S. has an Aide.

The Tutors

Technically, the tutors are not a part of the CLC personnel, since their number and schedule may not be regular. Tutors are usually high school students. In practice, they are 4th year students earning credits for civic action work as required by the school system. Otherwise, tutors, may be volunteers from the community who do not receive any compensation.

The Itinerant Teacher

The itinerant teacher was not a part of the regular staff of Project IMPACT for the simple reason that the activities he handled were not modularized and were, hence, conducted in the conventional manner.

INSTRUCTIONAL MANAGEMENT SYSTEM

As the name suggests, Project IMPACT is an instructional management system in which the parents and the community collaborate and cooperate with the school teachers toward the education of the child. It has also been referred to as a delivery system of education aimed at reducing the total costs of education without sacrifice of its quality.

Management (of the learning process) is the key word in IMPACT. The various modes of learning are designed to develop the ability for self as well as small group study. Thus the main actor is the learner himself. The teacher's role is reduced to that of management. In IMPACT the teacher is known as an Instructional Supervisor, or simply I.S. She no longer "teaches".

A more precise description of the project will demand an examination of its many innovative features which have no parallel in the traditional system of education in the Philippines today.

Learning through modules:

Under the traditional system, it is "normal" for a public school child to go through a whole year of schooling without benefit of a textbook. At best, he will share one with ten other classmates*.

In the IMPACT system, the child is assured of reading material throughout the year in the form of modules developed by subject matter specialists. He may go through each module either individually or with a peer group or a tutor. In view of individual differences, progress through modules is self-paced but only if mastery has been demonstrated. Self-pacing implies that IMPACT is ungraded.

Progress is indicated by the number of modules completed by a child. Children no longer refer to themselves as second, or fifth graders; they simply say what module they are in.

*This situation is being corrected slowly.

Learning Modes

1. Learning How to Learn Techniques

Considering that every day may be an entry day in an IMPACT CLC, every child who joins an IMPACT school is first given the guides to learning, depending on which part of the continuum he slips in. For example, if he is in the programmed teaching stage, he is given orientation by the IS on the expected behavior during programmed teaching periods and other related activities. If he is a transition learner or a peer group learner he is given orientation to his own learning activities as well as to his activities as a programmed teacher.

The usual time for the orientation on the Learning How to Learn Techniques is at the start of the school year. However, a child who comes in later during the year is given the same orientation.

2. Programmed Teaching

Programmed Teaching is programmed instruction where the "teacher" strictly follows a pre-arranged program which does not only present what is to be taught but also how it is to be taught. The pre-arranged lesson is prepared by professional teachers whose role in the IMPACT system is that of module writers.

The programmed teachers are elder pupils who have already attained mastery of the basic literacy and numeracy skills. They handle a group of 4 to 8 pupils for one hour each day - one half hour of teaching and another half hour of tutoring the slow learners in the group.

Some Language lessons in English and Mathematics have been provided by models on radio or simulated radio, such as cassette recorders. Starting school year 1977-1978 these language lessons were broadcast daily over Ministry of Public Information radio.

3. Transition Learning

Pupils who complete the programmed teaching modules (approximately after Level II) are allotted for the first semester's work in Level III with simplified peer group learning activities with an elder pupil monitoring their activities and providing them guidance and support.

The Role of the I.S.

The best single way to describe the role of the Instructional Supervisor is as a facilitator of learning. Almost everything that an I.S. does whether it be monitoring peer-group learning or encouraging regular attendance of students, is done to facilitate learning. And student learning is the primary goal of an Instructional Supervisor.

In contrast to the "teacher" who is the lecturer and entertainer in the traditional classroom, and who may wield dictatorial powers over his pupils, the IMPACT instructional supervisor is a source of inspiration and an expert guide to her pupils. Rather than work with the whole class on one learning task, she works with pupils as individuals who progress through the learning continuum at their own rate. Her expertise does not consist in her being a master of teaching strategies, but of her being better acquainted with each pupil as a person and as a learner.

Role of the Student

Regular school attendance is the norm in Project IMPACT. A child may be excused from regular attendance only if he is sick, or if his parents urgently need him in their work for survival. When this happens, he request for a leave of absence.

Students should attend the Center just as in conventional settings - students attend school. Nothing correlates with achievement as much as does time spent in learning. The Presidential Decree on compulsory attendance applies to IMPACT students no less than to students in conventional schools.

The grouping of students in programmed teaching classes and in peer groups makes Center attendance the norm. The system remains flexible, however, in allowing students to practice self study when they cannot attend.

The day-to-day activities of the I.S. in the performance of her role, may be grouped into three sub-tasks, namely:

Grouping pupils

Scheduling learning

Monitoring and guiding learning

Since these simplified peer group modules serve as bridge between structured programmed teaching modules and peer group-paced group learning modules these are called transition modules.

4. Peer Group Learning

Elder pupils who are on the second half of the continuum use the peer group learning mode. Each group is composed of 5 to 6 members who are heterogeneous in ability but who are studying on the same core modules. Each member of the group takes turns in acting as group leader and in answering questions.

Each peer group spends no less than three hours each day for peer group learning. However, the slower learners are given an additional hour to complete their activities on the core module, while the fast learners spend their hour on the advanced modules.

5. Self-instruction

Self-instruction is allowed of elder pupils who have attained literacy skills in the media of instruction under any of the following conditions:

1. When the learner has been absent due to illness and wants to catch up with his group.
2. When the learner has to stay away from the Learning Center to help his parents at work and he wants to keep pace with his group through self-instruction during his free time at home.
3. If the learner is an out-of-school youth who wishes to continue with his elementary education.
4. For the fast learner who studies the advanced module while waiting for his peer group to finish the core module being studied by the group.

6. Basic Skill Practice

Realizing the value of drill in the internalization of basic literacy and numeracy skills, there is instituted three fifteen-minute basic skill practice periods daily. These basic skill exercises are on spelling, vocabulary, and the four basic computational skills.

7. Skill training by Community Resource Persons

IMPACT utilizes the specialized skills of some community members. Certain modules for transition learning and peer group learning activities direct the learners to approach community resource persons.

Meetings between the learners and the resource person in the latter's residence or work station are arranged by the Rural Coordinator.

8. Itinerant Teaching

IMPACT-Naga has two itinerant teachers who handle Physical Education, Scouting, Arts, and Music. These two teachers spend one half day each week at each Learning Center and conducts large group mode activities.

The itinerant teachers may also demonstrate the performance modules in Practical Arts and supervise the school beautification activities of the children.

MANAGEMENT TECHNIQUES

I. Grouping of Students

a. Family Grouping

Since IMPACT is non-graded, the usual categories of children by Grade Levels do not apply. Instead, the entire school population is divided into families of at least 40 to 50 multi-level pupils. One Instructional Supervisor may handle 2 to 4 families provided the entire group she manages does not exceed 200 pupils. This vertical grouping of students is the basis for scheduling. A typical family make up may be as follows:

<u>Level</u>	<u>Number of Students</u>
VI	6
V	6
IV	7
III	9
II	10
I	10

All Instructional Supervisors at a Center meet together in setting up families. One criterion to be met by the family makeup is that friends, neighbors, brothers and sisters belong in the same family. This criterion is important because family members will want to feel responsible for each other, and friends and neighbors will have a greater feeling of responsibility. Another criterion is the mixing of sexes in each level, an important contributor to the socialization of children.

This latter criterion (heterogeneity) is necessary so that children of different ability levels can learn from each other. The difficulty with homogeneous grouping is that the slower students would fall farther and farther behind, lose their self respect and eventually drop out.

b. Peer Groups

The majority of learning for levels 4-6 is in peer groups. Students at these levels spend three hours each day in peer-group learning.

Every family has three peer groups: one Level 6, one Level 5, and the third, Level 4.

c. Programmed Teaching Groups

These groups are made up of some 8-10 children of mixed sexes at each levels 1, 2, and 3. Naga has found it best to make them fairly homogeneous in ability by subject so that the teaching process can be accelerated for the more able and made less fast for the less able.

Regrouping is done fairly often on the basis of the developing abilities of the children.

Level 6 pupils teach the level 1; Level 5 teach Level 3; and Level 4 teach Level 2.

d. Transition Learning Groups

The second half of Level 3 is used for transition learning during which time simple modules are used in a peer group learning format under the guidance of a level 5 student. Grouping should be heterogeneous as much as possible.

II. Scheduling of Learning

a. Programmed Teaching

Five families provide an optimum setting for the scheduling of programmed teaching because it will permit the students in a given peer group to do programmed teaching at the same time. Thus, peer group learning will not be disrupted as would be the case should only one or two of the group be gone (for programmed teaching) while the rest continue in peer-group learning.

The schedule illustrates how a single group conducts programmed teaching for five families at the same time. (Note that five families grouped this way will allow for five periods of programmed teaching by peer groups from different families.)

It would be well if two ISs were to join their families for this purpose. One IS could have only two families but have additional responsibilities related to monitoring the work of the Aide in the materials center. The other IS could have three families and limit her responsibilities solely to the children and have no administrative duties.*

b. Peer-Group Learning

During the six period in a day for Levels 4-6, one is given over to programmed teaching and one to the Green Revolution. During the remaining four periods, three are for peer-group learning and the other (see below) is for individual pursuits.

The joining of five families and the scheduling for different families to be responsible for different programmed teaching periods (as suggested earlier) dictates that peer-group learning occur at different times depending on family membership. For example, while one group is programmed teaching, the other groups will be learning in peer groups. This staggered schedule has two decided advantages: (1) it will also tend to stagger the time when a peer group is ready for a post test and (2) it will permit tutorial remediation during "individual pursuit" periods to occur at different times. Advantage no. 1 above will keep testing facilities from becoming overloaded, and advantage number 2 will permit more equitable use of tutor time across families.

(Please see the chart below for a hypothetical schedule of activities for peer groups of five families.)

*Please see page . schedule.

Contracting

Levels 4 to 6 pupils sign a group contract with their IS at the start of each week. The IS goes over the contract proposal of each peer group to determine if the targets they have set for themselves during the week are within the group's capabilities and abilities.

Group completion of contracts are recorded in the Contract Progress Chart which is conspicuously hung in the Learning Resource Center. In addition to this display of progress the members of the peer group are given positive reinforcements by the IS Aide and the IS.

c. Individual Pursuits

As indicated above, one period each day is to be given to what has been termed "individual pursuits". This is the hour during which the more-able students study enriched advanced modules (alone or in small groups). This is also the hour during which the less-able members of peer groups review and study the core module which the whole group had been studying during the previous three periods. (Note in the suggested scheme above that Individual Pursuits always follows the three periods of Peer-Group).

ISs will have to set up and maintain this type of schedule to insure that both kinds of learning occur during the one hour of individual pursuits. Most importantly, the IS should schedule herself or himself and tutors to assist the less-able peer group members during the individual pursuit period.

d. Green Revolution

In Naga, the ISs are in charge of Green Revolution gardening activities during the last period of the day.

e. Skill Practice

The IS should schedule the 10-15 minutes skill practice (drill) sessions during the 15 minute breaks between periods.

Below is the basic schedule of activities in each Learning Center in the five schools in Naga:

7:30	-	7:40	Flag Ceremony
7:40	-	7:50	Opening of Exercises
7:50	-	7:55	Trip to the Garbage Can
7:55	-	8:55	First Period
8:55	-	9:10	Spelling Drill
9:10	-	9:20	Recess
9:20	-	10:20	Second Period
10:20	-	10:35	Math Drill
10:35	-	11:35	Third Period
N o o n B r e a k			
1:30	-	2:30	Fourth Period
2:30	-	2:45	Vocabulary Drill
2:45	-	3:45	Fifth Period
3:45	-	4:45	Green Revolution

Levels 1 to 3 have their programmed teaching activities from the first period to the fifth period.

Levels 4 to 6 spend one hour in programmed teaching, 3 hours in peer group learning, and one hour in individual pursuits.

All pupils have green revolution activities at the last period of each day. During this period, Levels 4 to 6 undertake activities provided for in their modules while levels 1 to 3 are directed by the IS's.

The skill practice activities are conducted by the buddy system.

Here is a sample schedule of activities for families in Levels 4 to 6.

Families 7:55-8:55 9:20-10:20 10:35-11:35 1:30-2:30 2:45-3:45 3:45-4:40

Camia	PT	PG	PG	PG	IP	GR
Rosal	PG	PT	IP	PG	PG	GR
Adelfa	PG	PG	PT	PG	IP	GR
Ahito	PG	PG	IPT	PT	PG	GR
Rose	PG	PG	PG	IP	PT	GR

PT - Programmed Teaching

PG - Peer Group Learning

IP - Individual Pursuits

GR - Green Revolution

III. Monitoring and Guidance of Learning

This activity is the prime responsibility and activity of Instructional Supervisors. No other duty takes precedence, because it is through careful monitoring of the learning process and providing help and guidance when difficulties occur that the IS can truly be a facilitator of student learning.

Since learning will be occurring primarily in groups (programmed teaching, transition learning and peer-group learning) the results of this monitoring that will be the basis for subsequent IS help and guidance to those in need.

If an IS is responsible for two families of six groups each, there will be nine groups to monitor during any given one-hour period (three of the ISs twelve groups would not be meeting as groups; they would be conducting programmed teaching). The IS should plan to stop by each group for some five minutes each period (a total of 45 minutes thus used) and use the remaining 15 minutes in giving special attention to particular needs, most likely with the less able members of peer groups during the "individual pursuits" period, (This five minutes per group per period, allows an IS at least 15 minutes of monitoring/guidance per day with each peer-group because peer group learning covers three one-hour periods).

The IS Aide

The IS is assisted by an Aide who is a community volunteer. The tasks of the I.S. Aide include:

1. To ready all materials needed by pupils in programmed teaching and/or peer group learning and to issue them out to the pupils.
2. To keep record of pupil's attendance and to inform IS of pupils who are absent.
3. To assign learning places for programmed teaching and peer group learning.
4. To keep records of instructional materials, facilities and equipment delivered to the Learning Centers and to keep them within easy access of pupils.
5. To administer post tests, to check the papers and inform the IS of the child's performance.
6. To inform IS of inadequacy of supplies and facilities at the Learning Center.
7. To maintain records of pupil's group and individual progress on contracts and to inform IS of pupils falling behind schedule.
8. To maintain records of tutor's attendance.

Tutoring:

Tutorials form one component of the IMPACT Management System. Levels 4 to 6 pupils are tutored by high school students, parents, relatives and neighbors at the Learning Center or at home.

High school students report to the Learning Centers one day each month and they receive credits for their YCAP requirements for graduation. Parents and other community members serve as home tutors to their children and neighbors. Both the high school students and the home tutors are given orientation on how to tutor at the start of each school year.

Levels 1 to 3 pupils are given one-half hour tutorials for each subject by their programmed teachers after every 30-minutes of programmed teaching.

Management Forms

Project IMPACT has adopted the following management forms of record keeping purposes:

1. Form 1: School Register on pupil's daily attendance
2. Form 137B: Pupils' permanent records
3. Individual Progress Chart: individual pupils' accomplishment on the modules.
4. Modular Accomplishment Form: Records of Module Accomplishment of group of pupils according to their levels in the continuum.
5. Monthly Report Card: A form issued to parents monthly to show pupils' progress in terms of number of modules completed during the month.
6. Pupils' Progress Report: A small slip of paper which informs the parents that the child has successfully passed the module post-test.
7. Pupils' Weekly Contract: A kind of promissory note that the members of each family give to the IS wherein they pledge to finish a given number of modules during the week.
8. Group Contract Progress Chart: This is a chart which shows the weekly performance of each family among elder pupils. It shows whether the family attained the target for the week which they indicated in the Pupils' Weekly Contract or not.

EVALUATION OF STUDENT LEARNING

Mastery learning is extremely important in the IMPACT system since failure to learn earlier modules will certainly cause difficulties in later modules. This is because (1) the learning tasks are highly sequenced, and (2) the majority of learning is non-teacher directed. The means provided by IMPACT for mastery learning is the evaluation/remediation process.

In a conventional classroom the teacher normally prepares surprise short quizzes; an announced test covering a unit of learning; and a longer comprehensive examination corresponding to the end of a grading period. The child is rated numerically in relation to the norm of his class. In the Philippines, the elementary school child is given an achievement rating four times during a 10-month school year.

In IMPACT, the child receives no numerical (or letter) rating. Progress is continuous and criterion-referenced.

Among the Levels 1 to 3 pupils, evaluation/remediation is provided for at the end of every 30-minute period of programmed teaching.

Programmed teaching requires typically one-half of a period, the other half being given over to tutoring by the programmed teacher. Both the programmed teacher and the IS are watchful of any individual learning difficulties (evaluation) so that the child can be given special attention during tutoring (remediation).

Among the Levels 4 to 6 pupils, there are three types of evaluation/remediation.

1. Self-evaluation or Peer-group evaluation/remediation at the end of each lesson in the module.

The modular learning of Levels 4-6, whether in peer groups or through self-instruction, has a built-in evaluation/remediation cycle by means of short learning segments followed by self-evaluation and feedback. Students, thus, are able to discuss and explain to each other, providing an additional form of remediation. The child effects his own correction. If he passes the test, he proceeds to the next lesson; if he does not meet the criterion, he is directed to review the lesson.

2. Tutor/Aide Evaluation

Upon successful completion of a module, the child is given a module post-test by either the Aide or tutor. If he passes, he takes the pre-test for the next module; if he does not, he is given remediation on the lessons he failed to master. (Under mastery learning, a child would rarely fail a module post-test.) Module post tests (evaluation) identify any weaknesses of individual students and older students and peers are assigned to help overcome such weaknesses (remediation).

3. Instructional Supervisor Evaluation

A more comprehensive test is administered by the I.S. when the child completes a block of four or five modules. Block post tests, covering essential learning in some 5-10 modules, are scored by the Aide and reviewed by the IS (evaluation). For any difficulties identified by the IS, older students or peers are assigned to help the pupil overcome them (remediation).

End-of-year Evaluation*

A number of end-of-year examinations have been administered to IMPACT children including the following tests:

- a. A pre-and post-test to all levels based on the learning continuum prescribed by the Ministry of Education and Culture.
- b. The Philippine Achievement Test in Reading prepared by the Elementary School Division of the Ministry of Education and Culture to Level IV students. Comparisons were made with the reading ability of Level IV pupils of conventional schools in the school year 1974-'75.
- c. An achievement test prepared by module writers of Project IMPACT was given to Levels I and VI. Comparison was made with similar students in non-IMPACT schools.
- d. Ministry of Education and Culture, Region VII Achievement Tests were given to Levels IV and VII pupils. Comparison was made with Non-IMPACT pupils.

*In 1977, Project SOUELE (Survey of Outcomes of Elementary Education) test of the Ministry of Education and Culture were administered to all IMPACT schools as well as a set of control schools. The results of this test are described in a separate document.

Positive Reinforcement

One basic component of the system is the use of incentives and rewards. Positive reinforcement is always given to programmed teachers, tutors, peer group learners, and community members for the performance of a job.

Some forms of incentives used are social recognition, praise, incentive cards worth a certain number of points which can be used to buy items at the yearly rummage sale; comic books, puzzles, and drawings.

Positive reinforcement is a simple but powerful means for student motivation. In essence, it means rewarding appropriate behavior without punishing behavior that is inappropriate. In practice, it means showing pleasure when a student gives a correct response, e.g., smiling and saying, "Very good." It also means not showing displeasure to an incorrect response, e.g., not saying, "wrong" or "stupid". Students making incorrect responses are retaught or remediated until they are able to make a correct response, at which time they are given positive reinforcement. Positive reinforcement encourages learning and makes a student feel positive about himself. Negative reinforcement, on the other hand, discourages the learner and makes him feel unworthy.

SUPERVISION

In the context of the IMPACT Management System, supervision is defined as assistance given to the IS's and IS Aides to enable them to carry out their functions more smoothly. Supervision is provided by an Instructional Coordinator and by the IMPACT Field Coordinator.

a. The IMPACT Field Coordinator (FC)

He corresponds to the District Supervisor of the conventional system in rank but his role and role expectations are rather different from the former's:

1. To oversee the implementation of all Project activities in the Learning Centers with the assistance of the Instructional Coordinator;

2. To inform parents of children who have incurred excessive absences from the Learning Center;
3. To inform barrio officials and PTA officials of needed repairs of facilities and kiosks;
4. To be responsible for the maintenance and repair of equipment on a regular basis and to respond to immediate needs for repair in all the Learning Centers;
5. To schedule training of tutors and to provide for their training;
6. To identify community members with specialized skills and to arrange for meetings between the community resource persons and the pupils;
7. To make sure that needed tools and equipment are available at the Centers;
8. To evaluate the performance of the IS's and the Instructional Coordinator on the basis of the IMPACT model; to prepare their efficiency ratings at the end of each school year;
9. To assist the Project Director in the training of new IS's, Teacher Aides, and in the in-service training of all IS's;
10. To establish and maintain itinerant teaching schedules;
11. To provide immediate feedback to the Project Director on any problem that arises in the field;
12. To assist the Project Director in the recruitment of new IS's and teacher aides;
13. To submit a monthly report of all his activities to the Project Director at the end of each month;
14. To liaison with the office of the District Supervisors who have authority over the Centers under the conventional system.

b. The Instructional Coordinator (IC)

He corresponds to the principal in the conventional system, but unlike his counterpart he has the following functions to fulfill:

1. To assist the Instructional Supervisors in the implementation of the item programs for programmed teaching and peer-group learning by providing all necessary learning materials.
2. To assist the Instructional Supervisors in the assessment of their behaviors on the basis of the IMPACT model;
3. To review records of pupil contracts;
4. To assist the IS's in the preparation of learning schedules;
5. To provide immediate feedback on problems concerning programmed teaching, peer learning, and the instructional materials to the Center staff concerned;
6. To assist the Project Director in training new IS's and Teacher Aides and in the in-service training of all IS's;
7. To disseminate accurate information about the Project to all IMPACT visitors, both national and international.

Duties of the Education Analyst

- a. To train elder pupils as programmed teachers
- b. To monitor and evaluate IS behaviors on the basis of the IMPACT model
- c. To train new IS's
- d. To conduct in-service training of IS's
- e. To train Levels IV to VI pupils in peer group learning
- f. To ensure sufficient supply of modules, post tests, answer sheets and other learning aids and management forms used by IS's.

- g. To review Center records on the efficient conduct of the various learning modes.
- h. To prepare schedule of tutors.
- i. To review records of pupil contracts.
- j. To establish and maintain itinerant teaching schedules.
- k. To supervise the preparation of learning schedules by IS's.

The Rural Education Coordinator

The Rural Education Coordinator was not one of the components of the system. Rather, she was a part of the research staff and her role was to take charge of the administration and supervision of the Project in the five villages of Naga. Her day to day functions were as follows:

1. To coordinate with the district supervisors and principals or head teachers on the activities of the teachers at the Learning Center.
2. To survey community resources and to request them to assist at the Learning Center whenever their expertise, skills or assistance was needed.
3. To request for material community resources needed at the Learning Center.
4. To provide feedback to the Project Senior Staff regarding the progress of the Project and the problems encountered by the pupils with their self-instructional materials.
5. To be responsible for the distribution of self-instructional materials in the villages.
6. To monitor the classroom teachers in the distribution of modules to pupils, the administration of post tests and the remediation by tutors.
7. To coordinate closely with the I.S.'s in the evaluation of pupil's progress and of the instructional materials.

8. To make a follow up of pupil absences from the Learning Center.
9. To serve as link between the school and the parents especially on pupil problem and progress.
10. To conduct orientation of tutors, parents and other community resources with the assistance of the Project Senior Staff and the I.S.'s.
11. To assign tutorial responsibilities to tutors and to arrange for their schedule at the Learning Center.
12. To see to it that Learning devices needed by the pupils for modular activities were on hand at the Learning Center and to keep a regular inventory of these learning aids.
13. To give reports on the progress and problems at the weekly meetings.

PHYSICAL PLANT AND FACILITIES

Project IMPACT maximizes the use of existing physical plant and facilities in the different learning activities.

1. The Learning Resource Center houses all the materials for learning. It is divided into eight subject areas and a post test area. Test carrels should be in view of the IS Aide so that independence of test results can be assured.

2. Learning Places

The number of Learning Places needed in each Learning Center depends on the number of families. A school with 5 families needs 15 places for peer group learning and 15 for programmed teaching. Each learning place must be able to accommodate 5 to 8 pupils, and must be provided with loose chalkboard, eraser, and benches. To meet the needs for these places, the Project staff have utilized all extra rooms in the existing school building and have initiated the construction of Learning Kiosks by Community members. A Learning Kiosk is made of locally available materials.

Levels I-III are the most noisy since they "shout" many choral responses. Thus, each should be separated from other learning groups. Experience in Sapang Palay has shown that as many as 4 or even 5 P.T. groups in one classroom under the direct supervision of an I.S. can be fairly managed.

Peer groups are assigned to the kiosks under the supervision of the I.S. Aides.

3. A model garden

This area provides the children space for their projects in Practical Arts and Green Revolution activities.

4. Programmed Teaching modules for Levels I to III.
5. Peer Learning modules for Levels IV to VI.

6. Radio sets for the language lessons

It was planned that radio provide voice models in Pilipino and English beginning the second semester of Level two and running through Level three. There should be 15-minute voice model broadcasts daily for each of the two languages and levels. A possible schedule of broadcasts:

JUNE-OCTOBER

15 minutes (Pilipino) for Level III

15 minutes (English) for Level III

NOVEMBER-MARCH

15 minutes (Pilipino) for Level III

15 minutes (English) for Level III

15 minutes (Pilipino) for Level II

15 minutes (English) for Level II

Each Level II and III group will need access to a radio for the period outlined above. Thus, it is suggested that each family have one location for radio voice model broadcasting. (It may be possible to double up families for broadcasting, i.e., 20 rather than 10 students, but there could be a lot of confusion because of the need for choral responses in repeating what was said by the voice model.)

Broadcasts could either be from prepared tapes or live. A less desirable alternative would be the use of an itinerant voice model, i.e., someone who goes from family to family repeating the radio script.

7. Science facilities and tools and equipment for Practical Arts.
8. Equipment Storage: It will be necessary to plan for locked storage of:
 - a. all furniture of kiosks, including blackboards, display boards, desks, etc.

- b. cassettes or radios
- c. applied skills equipment, including garden tools for the Green Revolution

9. Instructional Materials:

- a. Modules contain 40-50 pages, and there are approximately 480 modules.
- b. Stored with modules are a sufficient number of answer sheets (one for each student for whom the module is appropriate.)
- c. Post tests (both module and block) are kept secure. One will be needed for each student for whom the post test is appropriate.
- d. Programmed Teaching
 - displays (one for each two families)
 - item program booklets (one for each programmed teacher)
 - content programs (with care, they are reusable. Approximately one per two families.)
 - student worksheets (when appropriate) - one per student.