PN-AAL-191

PROJECT IMPACT
(Instructional Management by Parents, Community and Teachers)

# SOME POLICY RELATED QUESTIONS AND ANSWERS ON PROJECT IMPACT

By the Research Division

I N N O T E C H

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Metro Manila, Philippines, 1979

A. ON ADOPTING/IMPLEMENTING THE IMPACT SYSTEM

1. WHY SHOULD AN EXISTING SCHOOL WANT TO ADOPT THE IMPACT SYSTEM?

For most cases, the immediate reason for adopting the IMPACT system is to help solve the problem of teacher shortage. Many growing schools find difficulty in recruiting additional teachers.

In the long run, financial economy will be effected both through savings in salaries and in capital expense for the construction of classrooms.

2. WHAT IS THE MAIN SOURCE OF ECONOMY IN THE IMPACT SYSTEM?

The reduced number of professionals in the staff.

The IMPACT project sites have amply demonstrated that the number of professionally trained teachers can be reduced to as much as one half.

3. CAN THE IMPACT SYSTEM BE IMPLEMENTED IN ANY SIZE OR TYPE OF SCHOOL?

Yes, under certain conditions:

a. In newly opened schools, total implementation is suggested.

b. In existing small to medium schools, total implementation can be effected after a placement test.

c. In large schools with wide campuses, where the buildings are spread out, the most outlying or isolated buildings may be immediately utilized to start as many classes as may be accommodated.

d. In large schools with very small or no grounds available, a few teachers may be singled out to provide the school with a model.

4. HOW LARGE A START WILL BE BEST FOR ANY ONE SCHOOL?

There is no one best size for a starter. However, it will be well worth the effort if:

a. A small one-building school will implement the system totally.

b. In medium-sized schools, implementation is done in at least one building of 3 or 4 rooms - involving at least 3 or 4 teachers, starting with a teacher-pupil ratio of 1:80.

Further, this start may be done:

in at least two schools under one district supervisor
in all Districts of the Division
in all Divisions of the Region
in all Regions of the System

5. WHAT OTHER CRITERIA MAY BE FOLLOWED IN THE CHOICE OF A SITE?

a. It will be best if a high school is of walking distance.

b. It may be good to start with volunteer teachers.

c. The cooperation of the community and parents need to be assured to a certain extent.

d. A dynamic supervisor will be best to start with.

6. CONSIDERING THAT PROJECT IMPACT WAS MADE POSSIBLE BY A FINANCIAL GRANT, HOW MAY THE IMPACT SYSTEM BE IMPLEMENTED IN THE PHILIPPINE SCHOOL SYSTEM WITHOUT ENTAILING ADDITIONAL EXPENSE?

Any decision on the implementation of the IMPACT system, or any of its components, must be premised or based on the observed performance of the system vis-a-vis its objectives. This objective is to develop an effective and economical delivery system for mass primary (elementary) education.

A cost-analysis of Project IMPACT was undertaken and a comparison was made of the costs of operating the five original schools in Naga, Cebu with the costs of operating a hypothetical set of comparable schools. In the computation, the experimental cost (in other words, the grant monies) was excluded. Analysis of the data revealed that the IMPACT system can be operationalized at half the cost that it takes to operate the conventional system. This large difference gives enough room for a more thorough re-examination of the items of expense in the budget of the conventional system.

The question of cost is perhaps raised because of the common knowledge that the Naga site has a full time Project Director who is not seconded from the school system, and whose entire salary, therefore, has to come from external sources. Moreover, the professional staff are given honoraria.

Happily, the three IMPACT sites in the Philippines illustrate three varying situations, particularly with regards to the administrative and supervisory personnel.

In Naga, Cebu the Project Director supervises instruction as well as the curriculum development component. The entire professional staff for curriculum development consists of teachers and administrators seconded to the project on a full - or part-time basis, and receive honoraria. All School Principals in the five schools were relocated, and their functions taken over by an Instructional Systems Coordinator for all the said schools. The role of District Supervisor is handled by an IMPACT Field Coordinator who happens to be the Principal of one of the schools. Both the Instructional Systems Coordinator and the Field Coordinator visit each of the five schools at least one day a week. Together, they undertake direct administration and academic supervision of the schools.

In Lapu-Lapu City, where there are three schools, there is no curriculum development unit. The schools use modules prepared for the Naga schools. All School Principals were also relocated. Administration and academic supervision are performed by the Project Director and an Instructional Systems Coordinator. The Project Director was formerly a Division Supervisor who has been seconded to the project and relieved of her functions as Division Supervisor.

The replication site in Sapang Palay consists of only one school. The curriculum production staff translates the modules prepared in Cebu in line with the bilingual policy.

The Project Director is a District Supervisor who has not been relieved of her duties as District Supervisor (but who receives an honorarium). Academic supervision is provided by an Instructional Systems Coordinator who happens to be the Principal of the school.

In all the three IMPACT sites, the number of teachers have been reduced to 50% of the original number.

It is believed that whichever of the three aforementioned arrangements under the IMPACT system is followed, a reduction of approximately 50 per cent of the operating costs of the conventional system could be realized. And to think that the IMPACT system is not only more economical but it is actually more efficient as revealed by the findings of an external evaluation using SCUTELE instruments!

## B. ON MODULES INSTRUCTIONAL MATERIALS

### 1. WHAT INSTRUCTIONAL MATERIALS WILL BE USED?

INNOTECH has 4 sets of modules from which an implementing school can choose.

a. Modules written per subject using the dialect (Cebuano) and English as the languages of instruction. (mimeographed)

b. Modules written per subject using the bilingual approach. (mimeographed)

c. An integrated set of modules (Levels I-VI) using the dialect (Cebuano) and English as the languages of instruction. (printed)

d. An integrated set of modules (Levels I-VI) using the bilingual approach. (mimeographed)

### 2. HOW CAN AN IMPLEMENTING SCHOOL (REGION OR DIVISION) AVAIL OF THESE MODULES?

The modules of Project IMPACT are copyrighted by INNOTECH. However, these can be availed of on certain conditions.

If a Region has resources, that Region (or Division) can create a curriculum production unit. This unit can be supplied with a set of the desired modules, which the unit may adapt and reproduce as desired.

All that INNOTECH expects is for the producing unit to acknowledge the source of its product.

3. ARE ALL THE MODULES SELF-CONTAINED?

The modules for Programmed Teaching necessitates the separate production of the teaching items. This is one reason for the suggestion to create a curriculum development unit for the Region. Charts, flash cards, posters need to be made for use of the Programmed Teachers.

It is essential that these items be ready by the start of the school year.

4. WHAT IS THE ASSURANCE OF QUALITY CONTROL IN THE PRODUCTION OF MODULES?

The production of modules is based on the same assumptions underlying the preparation and use of other programmed materials - that individuals can learn certain types of subject matter provided this is divided or broken down into small steps; that these steps are organized or arranged systematically, e.g., from simple to complex or from familiar to unfamiliar; and that the learners are given enough time to master each of these steps.

The production of IMPACT modules follows the same pattern as that in the writing of textbooks and other curriculum materials in the various curriculum development centers of the educational system, such as the Social Studies Center, the Science Education Center, and the Language Study Center. This pattern consists of first identifying subject matter specialists from among teachers in the field with potential for curriculum writing, and then seconding or detailing them to the Center where they devote their full time to writing.

The IMPACT modules, like the textbooks being written, are based on the continuum developed by the MEC and the curriculum development centers. Based on all these, IMPACT has developed its own integrated continuum. The IMPACT modules are based on this integrated continuum and use the conceptual approach.

The IMPACT modules are prepared by a team of subject matter specialists. An Instructional Methods Expert appraises and edits the module drafts preparatory to tryout. The Instructional Supervisors send to the Module Production Center feedback on the modules in order that corresponding revisions/refinements are made. The modules are then certified for printing.

For the Sapang Palay Project IMPACT, some modules need translation from Cebuano or English to Pilipino in accordance with the country's bilingual policy. A team of subject matter specialists perform the translations.

C. ON STAFF REQUIREMENTS/TRAINING/SUPERVISION

1. WHAT ARE THE STAFFING REQUIREMENTS OF AN IMPACT SCHOOL?

A comparison of the staff requirements of a conventional elementary school with an IMPACT CLC of 1,200 pupils each, would appear as follows:

| Staff Requirements | Conventional School Inputs | IMPACT CLC Inputs |
|---|---|---|
| 1. Principal/Education Analyst | 1 | 1 |
| 2. Academic Teachers | 35 | 12 |
| 3. Special Teachers (Library/ Guidance, Physical Education, Art Music, Nutrition, etc.) | Equal Numbers | |
| 4. I.S. Aides | 0 | 12 |

Prior to the introduction of Project IMPACT, the five barrio schools in Naga had a total of 55 teachers (11 per school average). Upon conversion to IMPACT, this was reduced to two per school. Only two supervisory personnel were retained of the 5 principals.

It will be our recommendation, of course, to retain a principal for each school, but quite definitely, in such small schools, the two I.S. (with the assistance of an I.S. Aide per school) were able to effectively manage that school.

And even if there were no aide and her function is given to a third professional per school, this would still mean a great reduction in personnel.

2. WHO WILL TRAIN THE TEACHERS?

INNOTECH has a training program for both teachers and supervisors. This program includes lectures, domonstrations, return-demonstrations, discussions and where feasible observation of IMPACT sites.

INNOTECH can supply the personnel for the training. The host Region will be expected to provide facilities and logistics.

3. HOW LONG IS A TRAINING PROGRAM?

For the I.S.'s, a period of 4 weeks at most will be best. For supervisors, two weeks will suffice, with the expectation that they learn the details on-the-job.

4. DOES NOT IMPACT CONTRIBUTE TO THE DISPLACEMENT/UNEMPLOYMENT OF TEACHERS?

The IMPACT system is not aimed at displacing/reducing the number of teachers presently employed. Rather, it is forward-looking and is in fact intended to cope with the problem of ever-increasing enrolment and the inability of the governments in Southeast Asian countries to further increase the percentage allocation for education in their national budgets.

Available educational statistical data show a very sharp drop in enrolment in teacher education institutions. To compound the problem on possible dearth of teachers especially in the years to come, there is a trend for teachers to seek better paying jobs, even as clerks and policemen.

In the meantime, the number of children seeking enrolment is steadily increasing because of our relatively high population growth rate. In the not too distant future after so many of the teachers presently employed will have retired, there may not be enough graduates of teacher education institutions to replace them and to teach additional classes.

In fact, in Sapang Palay a few teaching position have remained unfilled this school year for want of applicants.

Clearly, there may soon be an imperative need for an alternative delivery system for mass primary education in the Philippines and in the other countries of Southeast Asia. It is believed that the IMPACT system is a viable alternative.

Under the IMPACT system, a teacher's role is redefined to that of an Instructional Supervisor. If at the start of an implementation it becomes necessary to reassign some teachers, this is done simply to better utilize their services where they are best needed.

5. HOW DO YOU JUSTIFY A HIGHER SALARY FOR I.S.'s AND SUPERVISORS?

An IMPACT Instructional Supervisor (I.S.) is practically a Master Teacher, hence eligible to a higher salary scale compared with a classroom teacher. In the first place she handles more pupils (at least twice more). She also supervises non-professionals - an I.S. Aide, High School Tutors, and Community Resource Persons.

6. IF I.S.'s DO NOT DO DIRECT TEACHING, IS IT NOT POSSIBLE THAT THEY WILL MISMANAGE THEIR TIME?

The teacher who does not do direct teaching, as in the IMPACT system, may mismanage her time just as a teacher who does direct teaching under the conventional system may also mismanage her time.

The key is clear understanding of one's functions/duties and sustained dedication to ones responsibilities. The teacher, known as an Instructional Supervisor in IMPACT, does have functions quite different from those of the teacher of conventional schools.

Re-training programs are therefore regularly conducted to ensure that the Instructional Supervisor can perform effectively her role as manager of the various learning activities of pupils in the IMPACT system. While there is no definite time allotment for the tasks she has to do to monitor or facilitate learning, the demands on her time and attention are enough to keep her busy and vigilant all day.

7. IS AN I.S. AIDE INDISPENSABLE?

This question is perhaps asked in view of the difficulty of justifying a budget item for the salary of such a personnel. This is understandable, but the situation is not insurmountable.

The rationale for an Aide is that the professionally trained teacher must be spared of certain routine duties in order to be able to devote her full time to professional functions.

The keeping of records, filling up of forms, scoring of tests, even proctoring an examination, all these and many more, often fill up a teacher's time and sap her strength and vitality. These are best given to a non-professional.

The savings that can be generated out of the salaries of reassigned teachers can be partly utilized for I.S. Aides.

8. WITH ONLY TWO INSTRUCTIONAL SUPERVISORS PER SCHOOL, HOW CAN SUCH ACTIVITIES/SUBJECTS AS ARTS, P.E., MUSIC, SCOUTING, GREEN REVOLUTION BE ATTENDED TO?

An itinerant teacher is assigned to attend to the instructional needs of children in such activities as Arts, P.E., Music, Scouting, Green Revolution.

In the five schools in Naga, Cebu, two itinerant teachers, one male and one female, make the rounds of the schools. They are able to stay one day a week in each school.

The IMPACT system holds the same activities as the conventional schools - programs, meetings, literary-musical encounters, school festivals, and graduations. The IMPACT child has not been found wanting in the skills demanded by these activities.

The experience of Lapu-Lapu City shows that the pupils can make plans for their graduation rites by themselves and without the active participation of their teachers.

D. ON PHYSICAL FACILITIES REQUIREMENTS

1. WHY IS ADDITIONAL SPACE, OUTSIDE OF THE CLASSROOM NECESSARY?

The IMPACT system requires small groupings of children. All groups under one teacher cannot be placed inside one classroom at a time, otherwise, there will be much noise, and overcrowding.

In large schools, especially where there are morning and afternoon shifts, it is necessary to place the small groupings where they can be least disturbed; or where they can least disturb the Non-IMPACT classes.

2. WILL ADDITIONAL LEARNING SPACES NOT ADD TO THE COST OF IMPACT?

Learning spaces can utilize any unused area where the children can be comfortably placed. These include corridors, benches under trees, and unused rooms.

New structures (called kiosks) may be constructed of light materials as contributions of the community/ parents. The cost is minimal but if well planned, they can last several years, and even serve other purposes during certain occasions (as can be seen in the Sapang Palay case).

Although at first sight, this appears to be an additional cost, kiosks do in fact serve many functions that classrooms render. They enable each CLC to teach more students without the considerably greater cost of constructing traditional classrooms, not to mention their maintenance.

3. ASIDE FROM KIOSKS, ARE THERE ANY OTHER PHYSICAL STRUCTURES REQUIRED FOR IMPLEMENTING THE IMPACT SYSTEM?

Modules need to be stored properly when not in use. This can be done in inexpensive open shelves (even made of bamboo slats).

As need arises, the school may find it necessary to construct individual testing carrels. This, however, is optional. All that is necessary is for individualized testing to be conducted in a quiet place with no distractions.

4. HOW REALLY DIFFERENT ARE THE PHYSICAL FACILITIES OF IMPACT COMPARED WITH THE CONVENTIONAL SCHOOL?

A comparison of the input requirements of a conventional elementary school with an IMPACT CLC of 1,200 pupils each, would appear as follows:

| Physical Facilities Need | Conventional School Inputs | IMPACT CLC Inputs |
|---|---|---|
| 1. Classrooms (One per teacher or I.S.) | 30 | 12 |
| 2. Teachers' Desks, Chairs | 30 | 12 |
| 3. Blackboards (4 per room; one per kiosk) | 120 | 96 |
| 4. Kiosks | 0 | 24 |
| 5. Book shelves (for modules only, excludes normal library shelves) (10 in library, 1 per classroom) | - | 22 |
| 6. Study-Test Carrels | 0 | 0 - 10 |

Other facilities are assumed to be of the same number for both conventional and IMPACT CLC's.

E. ON MODULAR LEARNING UNDER THE IMPACT SYSTEM

1. DOES NOT MODULAR LEARNING NEGLECT THE SOCIALIZATION OF THE CHILD?

On the contrary, one of the more discernible outcomes of IMPACT learning is increased social sensitivity of the child. The doubt may have arisen because of the common misconception that IMPACT learning is limited to individualized study. Modular learning can take many forms - self-instruction, peer-group learning, tutorials, programmed teaching, skill learning from community resource persons, small-group activities, and even instruction by radio or taped cassettes.

In other words, by the very nature of the IMPACT instructional management system and materials, there are many and varied opportunities for children to socialize. In the small peer groups, the day-to-day interaction among children of about the same age is spontaneous, intensive, and free-wheeling. Moreover, each time the I.S. visits such a small group, her interaction with the children becomes more personalized, is even characterized by warmth.

The organization of children into "families", instead of by grade level, brings pupils of all grade levels under one IS. This closely approximates the basic social unit, the family, which consists of members of various ages. Children, especially the beginners, get a feeling of security in the knowledge that they have, not just a teacher, but perhaps an older brother or sister, or even a neighbor in their school family. On top of this, the IMPACT child has to constantly interact with one or two I.S. Aides, high school tutors, and itinerant teachers who represent various age and social groups.

On the other hand, the conventional school system, characterized mostly by teacher-dominated classroom activities, tends to inhibit the pupil's spontaneity. The situation in which the teacher has to interact with as many as 40 pupils at a time, tends to reduce classroom communication to an almost one way traffic of "telling" by the teacher and listening on the part of the pupils.

2. A PROFESSIONAL TEACHER HAS GONE THROUGH A STUDY OF CHILD PSYCHOLOGY, AMONG OTHERS. HOW CAN A PROGRAMMED TEACHER, WITHOUT ANY FORMAL TRAINING IN CHILD PSYCHOLOGY, EFFECTIVELY DEAL WITH CHILDREN?

A news reporter who recently visited Sapang Palay Project IMPACT asked a "programmed teacher" or P.T. (a Level V child, programmed teaching a group of Level III pupils), "Why do you teach?"

The quick reply was: "When I teach, the pupils are well-behaved, when our teacher teaches, the pupils are noisy."

Although the material to be taught by a P.T. is already programmed or set and all a P.T. has to do is to follow the steps indicated, the P.T.'s are trained before they actually engage in a programmed teaching situation much like what student teachers in the laboratory school of a teacher-training institution undergo when they are trained by a critic teacher before they handle a class.

The fact remains that the lower level child finds it easy to interact with one whose age is not too far from his own, who is like an older brother or sister. The atmosphere, therefore, is more relaxed and comfortable.

In contrast, the professional teacher often resorts to words and expressions more typical of adults. This happens in spite of the most conscientious efforts of the teacher to talk in the language of the child. This can be quite a serious problem at the elementary level.

3. IN THE ABSENCE OF A REGULAR TEACHER, HOW CAN MODULAR LEARNING DEVELOP CRITICAL THINKING?

Critics of the conventional system claim that the system emphasizes only content learning and neglects critical thinking. The preoccupation to "cover" so-called minimum essentials is overriding. "Minimum essentials" is virtually the same as subject matter content.

The first set of modules for Project IMPACT reflected the same defect. However, soon after the deficiency was noted, a new set of modules was prepared. This set includes the anticipated questions that can generate discussions which would entail some amount of logical thinking and decision-making. Provisions are made, of course, for the children to consult with the I.S. each time there is an impasse.

Each module is developed along a conceptual framework with a built-in evaluation system. A child, in order to achieve mastery, goes through a hierarchy of learning processes including critical thinking, the ability to reason and thus is trained to make intelligent decisions.

4. DOES NOT THE IMPACT SYSTEM ENCOURAGE ABSENTEEISM? WHEN CHILDREN TAKE MODULES HOME FOR STUDY, ISN'T THERE A TENDENCY FOR THEM TO PLAY RATHER THAN READ?

Absenteeism was one of the initial problems of Project IMPACT in the original site in Naga. However, a careful study revealed that the pattern was much like that obtaining in similarly situated conventional schools.

For your information, the IMPACT system adheres to the MEC regulation on school attendance - that a child should be present in his class for at least 150 school days a year in order to be eligible for admission to the next higher grade. Furthermore, one should not lose sight of the fact that in the IMPACT system, the monitoring of pupil progress is individualized and thus controlled to a large extent by the requirement regarding completion of a specified number of modules. All these should dispel the fear that the IMPACT system is conductive to absenteeism.

It may seem incredible but it is true, one problem of Sapang Palay is to stop children from coming to school when it is not their turn to come. And some parents have even complained that their children make module study an excuse for not doing home chores.

The truth is that since in the IMPACT system the monitoring of pupil progress is individualized and progress is determined in terms of mastery of a module, pupil attendance has to be accurately reported.

5. HOW ARE PRACTICAL SKILLS DEVELOPED THROUGH MODULAR LEARNING?

One of the more discernible characteristics of the IMPACT modules is the very clear, precise and logical sequencing of directions. This is a skill which the module writers have developed to a fine degree. This clarity of directions specially characterizes the practical arts modules.

In fact the directions in the modules for the lower levels are written in the dialect. This is to ensure that errors committed by the child are not due to inability to understand directions.

However, Project IMPACT has not overlooked the need for more adult expert guidance. This is provided by the itinerant teachers, and resource persons from the community. Under the system, the resource person either comes to school, or a group of children goes to his place of work.

A more formal arrangement, involving a community expert in tailoring and carpentry, is being followed in Solo, Indonesia.

6. DOES NOT THE CONCEPT OF INDIVIDUAL PACING, UNDER IMPACT COMPLICATE OR MAKE DIFFICULT THE TRANSFER OF PUPILS?

Transfer of pupils from IMPACT schools to conventional schools and vice versa should not pose a problem.

The procedure for placement in the proposed multiple exit reentry scheme evolved by the MEC, utilizing placement test may be used.

Through the use of validation techniques and placement tests, pupils who transfer from the IMPACT schools can be properly classified for grade placement. In IMPACT, children progress to the next higher learning level on the basis of the number of modules completed.

7. HOW CAN THE PARENTS BE EXPECTED TO ASSIST THEIR CHILDREN IN LEARNING THROUGH MODULES WHEN MANY OF THEM MAY BE ILLITERATE OR SEMI-LITERATE? MOREOVER, THEY ARE BUSY EARNING A LIVING.

The acronym, IMPACT, for Instructional Management by Parents, Community, and Teachers is apt in that "parents" comes ahead of "community" and "teachers".

The role of parents in the IMPACT system is the same as that in the conventional system -- giving assistance to the child and participating in school activities. Hence, parents help monitor the learning of modules, the accomplishment of contracts; and if they possess certain expertise, they may volunteer their services as resouce persons.

In IMPACT, the nature of the modules is such that the learning tasks are clearly specified, making it relatively easy for parents to give assistance to their child.

It is not surprising, therefore, that in PTA meetings, so-called illiterate parents themselves talk about the potential of IMPACT learning on the basis of their own experience in learning from the modules. In other words, one important concomitant of modular learning by the child is the spillover of such learning to the parents and other members of the household, i.e., the elders learn incidentally as they hear the pupil read his module or discuss this with others. As in fact, the readability of the IMPACT modules make them also ideal for adult literacy education.

Another observation that has been made is that it is easier to marshall the human resources in a community when it is the pupils tehmselves who directly appeal for help than when the teacher is the one who asks for assistance.