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**Toward a More Efficient Primary Education System:
An Experimental Approach to the Problem of
Dropout and Repetition in Indonesia**

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19

**TOWARD A MORE EFFICIENT PRIMARY EDUCATION SYSTEM:
AN EXPERIMENTAL APPROACH TO THE PROBLEM OF DROPOUT
AND REPETITION**

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A C K N O W L E D G M E N T S

We wish to express our appreciation to the Management Research Team who designed the original project from which this report is derived. They completed the onerous task of synthesizing the available research on Indonesian drop-out and retention characteristics. In addition, they are responsible for the development of six of the strategies included in the study.

The generous help we received from educators and government officials in Central and Western Java, and Western Sumatra was a major factor in our attempt to bridge the academics of research and the practicality of the field.

We are also indebted to:

- 1) Ann MacNamara, AID Project Officer, who spent many hours preparing material for our visit, offering her observations and advice, and helping take care of the many administrative details needed for this project;
- 2) Richard Durstine, UNESCO Specialist in Educational Planning, who contributed his critical evaluations and comments at just the right times;
- 3) Edward Heneveld and Hal Carpenter, Ford Foundation Project Specialists, who spent time reviewing our work and suggesting alternatives; and
- 4) The BP3K personnel for their help in preparing this report.

But our greatest appreciation goes to the children. They are why we came to Indonesia.

W.W.F.
N.L.C.

PURPOSE OF THIS REPORT

The purpose of this report is to:

- 1) Evaluate the feasibility of implementing a series of strategies designed by the Indonesian Department of Education (BP3K) to increase school retention in primary school. (Grades 1-6).
- 2) Generate alternative strategies if those proposed are not judged to be logically, economically, politically, and administratively feasible.
- 3) Develop a research design for each strategy.
- 4) Identify the budgeting components of the project.
- 5) Define the overall administrative and operational procedures of the project.
- 6) List the resources needed to complete the project.
- 7) Describe the articulation of this project with long range action research on Indonesian educational problems.

SUMMARY OF THE PROJECT

Nine strategies were developed to increase primary (Grades 1 through 6) school retention. Each strategy evolved from:

- 1) The relevant research on school drop-outs and retention problems in Indonesia.
- 2) Conferences by the Indonesian Department of Education with colleagues and professional educators.
- 3) Site visits by the Department of Education representatives and the International consultants.

The nine strategies were:

- 1) Increasing instruction for those who miss school.
- 2) Automatic promotion with a fourth grade certificate of attendance.
- 3) Increasing the teaching of Bahasa Indonesian.
- 4) Changing teachers so that those judged the most competent teach the lower grades.
- 5) Increasing instruction for those who miss school coupled with automatic promotion.
- 6) Inforcing a regulation that teachers must visit the homes of any children who miss three consecutive days of school.
- 7) Adjusting the school calendar holidays to match the harvest cycles.

- 8) Changing parent's attitudes concerning the value of education for their children.
- 9) Compulsory education with financial assistance to pay the school fees.

Strategies were selected which could become a part of the Indonesian national educational policy and which did not involve developing new materials. The one exception to this guideline was Non-Formal Education, which involves developing new material to influence parental attitudes toward education. Parental attitudes were judged such an important aspect of the problem and solution to school drop-outs that it was decided in this one case to support the development of new materials.

Five areas, East, West, and Central Java, West Sumatra, and South Sulewasi, were selected as the field research centers. Within each geographical area a Teachers College and a University will be the sub-contracting agents to carry out the implementation of the strategies and to gather data to evaluate the effectiveness of the strategies.

The project should yield helpful information for projecting the human and economic costs of various policy making decisions. The project is planned for a duration of two and one half years.

TABLE OF CONTENTS

PROJECT OVERVIEW.....	1
Introduction	1
Objectives.....	3
Assumptions and Constraints	4
STRATEGIES	9
Strategy I: Remedial Instruction	9
Strategy II: Automatic Promotion and Fourth Grade Certificate.....	13
Strategy III: Intensification of Indonesian.....	16
Strategy IV: Remedial Teaching-Automatic Promotion Fourth Grade Certificate.....	20
Strategy V: Teacher Interchange.....	23
Strategy VI: Teacher Visitation.....	26
Strategy VII: School-Time Adjustment.....	29
Strategy VIII: Non-Formal Education.....	32
Strategy IX: An Interaction Strategy: Financial Assistance and Compulsory Education.....	35
OVERALL ANALYSIS OF THE PROJECT.....	39
Basic Components.....	39
Basic Design.....	41
Measures.....	45
Samples.....	50
Data Reporting.....	50
Type of Analysis.....	54

Implementation.....	56
FINAL ANALYSIS AND POLICY RECOMMENDATIONS.....	63
FURTHER TECHNICAL INPUTS AND NEEDED RESOURCES.....	65
National Consultants.....	65
International Consultants.....	65
IMPROVING THE LIFE OF THE RURAL POOR.....	67
ROLE OF WOMEN IN THE DEVELOPMENT OF INDONESIA.....	68
FURTHER DIRECTIONS FOR STUDY.....	69
Promotion Standards.....	71
MONITORING THE IMPLEMENTATION PROCEDURE AND COSTS.....	73
Cost of the Project.....	74
BIBLIOGRAPHY.....	78
APPENDICES.....	79
Appendix A: Further Suggestions for the Non-Formal Education Treatment.....	79

PROJECT OVERVIEW

Introduction:

Many studies have been conducted to determine the causes for drop-outs and repetition in the public primary educational system of Indonesia. These studies (Note Bibliography) have yielded recommendations for remedial measures. However, to date, there has not been any systematic attempt to test these recommendations nor to determine their effectiveness.

Recently an Indonesian Management Research Team prepared a proposal for conducting experiments to test such recommendations in practice. Following is a brief discussion of the conceptual framework of that document.

The Management Research Team identified three sources of inefficiency. They were:

1. Economic Problems
2. Cultural Problems
3. Language Problems

Cause and effect relationships were then identified for each of these sources along with the projected feasible strategies to meet the needs of children who drop-out of primary school or repeat a grade.

Several causes were identified for the economic problems. They were:

1. The inability of the parents to pay educational costs.

2. The children withdraw temporarily from school:
 - a. To work on family properties (i.e. rice fields).
 - b. To work at home (i.e. baby sitting).
3. The unavailability of economic incentives for children or parents in the society.
 - a. There is little economic reward for educational attainment (i.e. jc

The second identified source of interference with school attendance was attributed to cultural problems. The parental aspirations for the child's future do not necessarily relate to six years of primary education. The third area, language problems, dealt with the difficulty of the child to function in Bahasa Indonesian. Bahasa Indonesian is the national language of Indonesia. Many languages and dialects prevail throughout the islands of Indonesia which creates an educational problem of great magnitude. As a result, any one or combination of these factors has resulted in the children either repeating a grade or dropping out of school.

In order to correct these problems the Management Research Team listed twelve conceptual strategies which could be tested. They were:

1. Financial Policies
2. Holiday Adjustments
3. Remedial Teaching
4. School-Time Adjustment
5. Entrance Requirements
6. Man-Power Requirements
7. Certificate for four years of schooling
8. Multi-Entry System

9. Non-Formal Educational Activities
10. Intensification of the Teaching of Indonesian
11. Automatic Promotion
12. Compulsory Education

After examination by the consulting team and representatives of the Indonesian government the twelve strategies were reduced to nine basic components. Several strategies such as man-power requirements, multi-entry system, and entrance requirements were dropped because they were judged to difficult to implement. Other strategies were combined to make more powerful treatments (i.e. school-time adjustment with holiday adjustment and automatic promotion with certificate of four years of attendance). Two strategies, teacher interchange and teacher home visitation, were added as a result of the consultants field visitations.

In the following reaction report nine experimental strategies and treatments to test the recommendations over a two year period are presented.

Objectives:

1. To conduct experiments with feasible educational strategies to solve the problems of drop-out and repetition at the primary school (Grades 1-6) level in an overall attempt to enhance the efficiency of the primary education system in Indonesia.
2. To develop a design for the administrative machinery needed to implement each experimental strategy.
3. To determine which experimental treatment is most appropriate for each geographical location.

4. To develop the evaluation and monitoring procedure for each experimental treatment.
5. To identify the cost elements for each experimental treatment.

Assumptions and Constraints:

1. The BP3k and the GOI have the power, authority, and administrative ability to implement the experimental strategies in the designated geographical locations.

The Indonesian government is highly centralized and the BP3k and the GOI have extremely talented, dedicated and well trained administrators to implement the strategies. Limitation of funds appears to be their major handicap.

2. The indirect costs and the value of child labor to the family may be so high as to off set the effect of the experimental treatment.

The indirect costs of books, clothing, and other supplies for schooling may be greater than the family budget will allow. This is especially true for larger families. In addition, the child's contribution in the field or at home may be required for the family unit to function on an everyday basis.

3. The parents and children can be convinced that there is indeed value in six years of primary school education.

The parental aspirations toward the child's future as

well as the child's aspirations may not be related to school because there is not a direct relationship between the school curriculum and the opportunities available in a changing world of work.

4. The probability of becoming a drop-out in primary school increases markedly for those students who are forced to repeat a grade.

Children who drop-out only temporarily to work at harvest time fall behind in their studies and are forced to repeat a grade. As a result, the frustration and failure of non-achievement in school is a contributing factor to the drop-out rate.

5. There will be adequate school facilities and materials to conduct the experimental treatments.

Currently, there are limited school facilities available. As a result, several shifts (or schools) operate in one building. The high use of school grounds extremely limits the hours a child may attend school each day. The availability of books is also limited with only a small proportion of students having the needed materials. However, a World Bank loan to the Indonesian government is currently trying to rectify the textbook problem.

6. Each of the treatments will interact with other events which the research teams may not be able to control.

The experimental treatments will interact with curriculum

reform teaching methodologies, student teacher interactions and other such events which are beyond the control and scope of this study.

7. The variability of the holiday seasons constitutes a factor impinging upon the experimental treatments.

The change from year to year of holidays will complicate the experimental treatments because a new set of school days will have to be determined each year.

8. The division of the SPP fee categories into income levels (high, middle, and low) may not represent the true income for each level.

Many factors other than income determine how a family is assigned a SPP fee. Thus the SPP fee scale may be a measure of social interaction as well as income. This fact is true whenever a division is made in such an economic structure. However, the SPP fee may be the most efficient system available for classifying parent's income.

9. The inability to find a student who has dropped-out may prevent finding out the reason for students leaving school.

When a student drops out of school and can not be found or another individual who is knowledgeable about

the student can not be found, the data collection on that student will be eliminated. If data loss occurs in more than 20 per cent of the sample, the data may be of questionable validity.

10. If the student changes villages from the experimental to the control group, the data will be contaminated.

Students who change from one group to the other will create problems in analysis of data because they would be counted in both groups. Furthermore, they may carry the effects of the experimental strategy to the control.

11. The lower the income group the greater the number of factors affecting retention. Therefore:

- a) If only one factor is implemented the middle and upper income groups will do better than the lower income group; and
- b) If more than one factor is examined the lower income group will be affected more than the middle and upper income groups.

Many factors account for low income students dropping-out of school. Alienation of only one factor may contribute so little to rectify the problems of going to school for the low income group as to be hardly discernable. However, at some level, a combination attack on the problems will produce measureable positive effects. For the purpose of this study a combination of two strategies is assumed to be the critical point.

12. The inordinately high grade retention rate for the early primary grades results in a high drop-out rate.

Previous studies indicate that the children who repeat grades are the same children who drop-out of school (i.e. over half of those who repeat a grade become drop-outs. See the Ruth Daroesman Study). Therefore, if something could be done to reduce grade repetition, the drop-out rate would be reduced. Currently, little is done, in a systematic way, to help children keep up with their class.

13. The physical location of either primary or secondary school buildings might make access prohibitive for certain populations, thus indirectly effecting school attendance.

School location studies have indicated that quite frequently the mislocation of a school in relationship to area demographic considerations has effected school attendance due to exorbitant transportation costs, duration and physical effort required to walk to a school, and aspirations of parents who claim that secondary schools may be physically out of reach (in neighboring cities).

14. The "reality" of limited economic development and attendant employment opportunities upon which extended school preparation is rationalized may indeed be difficult to deny in a campaign to change parental valuation of education.

S T R A T E G Y I

R E M E D I A L I N S T R U C T I O N

Operational Statement:

The increase of instruction through various methodologies (i.e. enrichment modules, intensive instruction, IKIP student-teachers) for students who miss school.

Assumptions:

1. Students drop-out of school when they miss class for a period of time because they fall behind their group and there is no contingency to help them catch up.
2. Students are found to repeat grades when they miss class and fall behind because there is no contingency to help them catch up.
3. Instructional remediation will be an effective mechanism for reducing repetition of grades and drop-outs.
4. The strategy of remedial instruction can be articulated with ongoing projects to prevent duplication of effort (i.e. Development School enrichment modules, Pamong self-instructional materials).
5. Students will return after short periods of school absence (i.e. harvest season) to continue their education.

Limitations:

1. Even if funds are available to support remediation, outside commitments of the teacher may prevent or limit the

Both the Development Modules and the Pamong modules could be used for this strategy. The Pamong modules parallel the national curriculum and would probably be of more use providing grades 2 and 3 are finished in time for this

application of the strategy to students in need of remedial instruction.

2. The quality of the remedial methodology may be so low as to have little or no influence on helping the students catch up with their class.
3. The student may not be willing or able to participate in remedial instruction for a variety of reasons (i.e. parental labor needs, student aversion to school, inappropriate time of remediation).

Hypotheses:

If instruction is increased (i.e. traditional or modular) to help students who have missed class catch up with their class then:

HA₁ School retention will be increased over the previous year in which remedial instruction was not applied.

HA₂ School retention will be increased over a comparable school in which remediation is not systematically applied.

HA₃ Grade repetition will be decreased over the previous year in which remedial instruction was not applied.

HA₄ Grade repetition will be decreased over a comparable school in which remediation is not systematically applied.

HA₅ School retention will be increased and grade repetition will be decreased more for middle income group, next for lowest income group, and least for upper income group.

If the instructional methodology is based upon the modular approach then:

HA₆ There will be a greater increase in school retention and a decrease in grade repetition than if traditional instruction is intensified.

(NOTE: If two types of modules are used, comparisons might be made between the modules).

Sample:

1. Type:
 - 1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.
 - 1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting points to identify high, middle, and low groups.
 - 1.12 Blocked on urban/rural settings.
 - 1.13 Blocked on sex.
2. Purposive:
 - 2.1 Geographical distribution
 - 2.2 Accessibility of school
 - 2.3 Local sanctioning
 - 2.31 Bupati
 - 2.32 Camat
 - 2.33 Lurah
 - 2.4 Instructional methodology.
3. Hold at 80 per cent on the follow-up sample of drop-outs.
4. Obtain 1976 drop-out data for selection of low retention schools.

5. Develop provisions for local school attendance record keeping.

STRATEGY II

AUTOMATIC PROMOTION AND FOURTH GRADE CERTIFICATE

Operational Statement:

Continuous progress will be the school policy for grades one through six. In addition a certificate of attendance will be given at the termination of the fourth grade.

Assumptions:

1. A certificate of attendance will help to hold students in school who would normally drop-out in the first three grades.

Limitations:

1. The certificate of attendance may not be perceived by parents and students as sufficient incentive to stay in school.
2. Currently, primary school facilities are inadequate to accommodate increased number of students at each grade level.
3. Automatic promotion may be used as an excuse for not providing more instruction to students who need it.

Hypotheses:

If a automatic promotion is coupled with a fourth grade certificate of attendance as school policy then:

HA₁ The school retention rate will increase over the

previous year in which automatic promotion was not in force.

HA₂ School retention rates will increase in grades 1 through 4 over a comparable school without such policies.

HA₃ School retention rates will decrease in grade five over grade four but still be higher than in the comparable school without such a policy.

HA₄ The effect on increasing the retention rate will be greatest on the middle income group, next on the lower income group, and least on the upper income group

Sample:

1. Type:

1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.

1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting points to identify high, middle, and low groups.

1.12 Blocked on urban/rural settings.

1.13 Blocked on sex.

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati.

2.32 Camat .

2.33 Lurah

2.4 School which does not have automatic promotion
and 4th grade certificate of attendance.

3. Hold at 80 per cent on the follow-up sample of drop-outs.
4. Obtain 1976 drop-out data for selection of low retention schools.
5. Develop provisions for local school attendance record keeping.

STRATEGY III

INTENSIFICATION OF INDONESIAN

Operational Statement:

Increase in the number of hours of instruction in Bahasa Indonesian for grades 1 through 6 and a decree that teachers and students will use Bahasa Indonesian throughout the school day in all non-instructional activities.

Assumptions:

1. The decree and rationale concerning the increased use of Bahasa Indonesian in grades 1 through 6 will be sufficient to convince teachers and students to comply with the decree.
2. The BP3k is capable of arranging for the issuance of a decree and rationale for compulsory use of Bahasa Indonesian in an experimental context.
3. Students repeat a grade or drop-out of school because of their low facility in Bahasa Indonesian.

Limitations:

1. The basic limitation of this strategy is the assumption that such a decree and attended rationale has the power to change the peoples behavior.
2. Socio-economic and cultural factors interact with the strategy to act as a constraint on the peoples ability to follow this decree.

3. The strategy will be limited by the quality of the language ability of the teachers in Bahasa Indonesian.

Hypotheses:

If instruction in Bahasa Indonesian is increased for grades one through six then the retention rate will:

- HA₁ Remain the same for the first year of the study over the previous year.
- HA₂ Increase for the second year of the study over the first year of the study.
- HA₃ Increase the second year over a comparable control group in which the teaching of Bahasa Indonesian has not been increased.
- HA₄ Increase most dramatically for the middle income group, next for the lower income group, and least for the upper income group.

If instruction in Bahasa Indonesian is increased for grades one through six then the number of students repeating grades will:

- HA₅ Remain the same for the first year of the study over the previous year.
- HA₆ Decrease for the second year of the study over the first year of the study.
- HA₇ Decrease the second year of the study over a comparable control group in which the teaching of Bahasa Indonesian has not been increased.

HA₈ The effects for both retention rate and number of students repeating grades will be most noted in the middle income group, next in the lower income group, and least in the upper income group.

HA₉ If instruction in Bahasa Indonesian is increased for grades one through six then student achievement in a standardized examination will be greater in the experimental school than in a comparable school in which the teaching of Bahasa Indonesian has not been increased.

Sample:

1. Type:

1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.

1.11 Each individual school classified by SPP scale for that school. Arbitrary select cutting point to identify the middle income group.

1.12 Blocked on urban/rural settings.

1.13 Blocked on sex.

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati

2.32 Camat

2.33. Lurah

- 2.4 Must not have Bahasa Indonesian as local language.
3. Hold at 80 per cent on follow-up on sample of drop-outs.
4. Obtain 1976 drop-out data for selection of low retention schools.
5. Develop provisions for local school attendance and grade repetition record keeping.

STRATEGY IV
REMEDIAL TEACHING - AUTOMATIC
PROMOTION - FOURTH GRADE
CERTIFICATE

Operational Statement:

1. The increase of instruction through various methodologies (i.e. enrichment modules, intensive instruction, IKIP student-teachers) for students who miss school.
2. Continuous progress will be the school policy for grades one through six. In addition a certificate of attendance will be given at the termination of the fourth grade.

Assumptions:

1. Over a period of time automatic promotion alone will increase instructional problems and contribute to a higher drop-out rate.
2. Automatic promotion coupled with remedial teaching will minimize the instructional problems and will promote primary school retention.

Limitations:

1. See limitations for the separate strategies. Number three of Automatic promotion does not apply.

Hypotheses:

If instruction is increased (i.e. traditional or modular) to

help students who have missed a period of school catch up with their class and automatic promotion is decreed with a fourth grade certificate then school retention will be increased over:

- HA₁ The previous year in which remedial instruction, automatic promotion, and a fourth grade certificate were not applied.
- HA₂ A comparable school in which remediation, automatic promotion, and a fourth grade certificate was not systematically applied.
- HA₃ If the instructional methodology to remediate students is based upon the modular approach and automatic promotion is decreed then there will be an increase in school retention and less grade repetition than if traditional instruction is intensified.
- HA₄ If remedial teaching, automatic promotion, and a fourth grade certificate are applied then school retention will be increased and grade repetition will be decreased most for the lower income group, next for the middle income group, and least for the upper income group.

Sample:

1. Type:
 - 1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.
 - 1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting point to identify high, middle, and low

1.12 Blocked on urban/rural settings.

1.13 Blocked on sex.

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati

2.32 Camat

2.33 Lurah

2.4 Instructional methodology

3. Hold at 80 per cent on the follow-up sample of drop-outs.

4. Obtain 1976 drop-out data for selection of low retention schools.

5. Develop provisions for local school attendance record keeping.

S T R A T E G Y V
T E A C H E R I N T E R C H A N G E

Operational Statement:

Teachers will be ranked on competency from high to low and assigned to classes so that the highest in competency will be teaching the lowest grades.

Assumptions:

1. The best teachers are currently teaching in the upper grade levels.
2. Because the students in the lowest grades receive the poorest and least amount of instruction, teaching becomes a factor which contributes to children dropping out of school.
3. A system of rewards for teaching the upper grades has evolved over a period of time (i.e. smaller class size, more prestige).
4. That a reward system can be devised to attract the upper grade teachers to teach the lower grades.
5. Teachers can be ranked by some system of competency.

Limitations:

- The teaching methodology employed at the upper grade levels may not be appropriate for the lower grade levels.
2. The teacher dynamics and attitudes for older students may not be compatible for the younger students.

3. The upper grade teachers may have unrealistic expectations for the lower grade students.
4. Teacher resistance may be so great that the reward system may not be sufficient to change negative attitudes towards teaching lower grades.

Hypotheses:

If teachers of highest competency are assigned to the lowest grades then:

- HA₁ A higher proportion of students will remain in school than have in the past when no such action was taken.
- HA₂ A higher proportion of students will remain in the experimental school than in a comparable school in which no such action was taken.
- HA₃ Fewer students will repeat grades than have in the past when no such action was taken.
- HA₄ Fewer students will repeat grades in the experimental school than in a comparable school in which no such action was taken.
- HA₅ The effects on grade retention and reduction of grade repetition will be most dramatic on the middle income group, next on the lower income group, and least on the upper income group.

Sample:

1. Type:

- 1.11 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.
 - 1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting point to identify high, middle, low income groups.
 - 1.12 Blocked on urban/rural settings.
 - 1.13 Blocked on sex.
2. Purposive:
 - 2.1 Geographical distribution
 - 2.2 Accessibility of school
 - 2.3 Local sanctioning
 - 2.31 Bupati
 - 2.32 Camat
 - 2.33 Lurah
 - 2.4 No such policy of assigning the most competent teachers to the lower grades is in force.
3. Hold at 80 per cent on the follow-up sample of drop-outs.
4. Obtain 1976 drop-out data for selection of low retention schools.
5. Develop provisions for local school attendance record keeping.

S T R A T E G Y
T E A C H E R V I S I T A T I O N

Operational Statement:

A decree that all teachers must visit the home of any of their students who miss three consecutive days of school:

- a) To determine the reason for the child's absence;
- b) To attempt to convince the parent that the child should return to school.

ASSUMPTIONS:

1. Many children fail to return to school because of the presumed indifference of the school to their presence in class.
2. Parents will be favorably disposed towards a visit to their home by the teacher and this will influence them to send their child to school.
3. The teachers will take the task of visiting the parents home seriously and try to convince the parents to send the child back to school.

Limitations:

1. The child's home may be so remote that the teacher may not be able to locate the parents.
2. Teacher absences from the classroom (estimated as high as 40 per cent) may be the real problem.

Hypotheses:

If a decree is made and enforced that teachers must visit the homes of any students who miss three consecutive days of school then:

- HA₁ School retention will be increased over the previous year in which such a decree was not made or enforced.
- HA₂ School retention will be increased over a comparable school in which such a decree was not made or enforced.
- HA₃ Grade repetition will be decreased over the previous year when such a decree was not made or enforced.
- HA₄ Grade repetition will be decreased over a comparable school in which such a decree is neither made or enforced.
- HA₅ School retention and grade repetition will be affected most for the middle income group, next for the lower income group and least for the upper income group.

Sample:

1. Type:

- 1.1. Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.
 - 1.11. Each individual school stratified by average SPP scale for that school. Arbitrary select cutting points to identify the middle income group.

1.12 Blocked on urban/rural settings

1.13 Blocked on sex.

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati

2.32 Camat

2.33 Lurah

2.4 Either no decree was issued or enforced.

3. Hold at 80 per cent on the follow-up sample of drop-outs.

4. Obtain 1976 drop-out data for selection of low retention schools.

5. Develop provisions for local school attendance record

ke-

STRATEGY VII

SCHOOL - CALENDAR ADJUSTMENT

Operational Statement:

Local community adjustment of the school calendar to be congruent with child labor use to maximize student attendance

Assumptions:

1. The conflict between child labor use and the present school calendar is a major factor in promoting drop-outs.
2. Given the authority, the community can adjust the school calendar to provide free time for child labor use and cultural activities.
3. It is assumed that after school calendar adjustment of cultural and socio-economic activities is made, there will still be sufficient time to accommodate the government regulate 240 days per year of school
4. It is assumed that the use of present school facilities is sufficiently flexible to accommodate the community adjustment of the school calendar.

Limitations:

1. The more heterogeneous the production cycle the more difficult it will be for the community to implement the strategy. Conversely, the more homogeneous the production cycle the greater the ease for the community in implementing the strategy.
2. The value of child labor in the production process may be so great as to offset any adjustment that might be made in

the school calendar.

3. The school staff may not be able to adjust their school instructional time to accommodate the alternative school calendar.

Hypotheses:

If the local community adjusts the school calendar then:

- HA₁ The school retention rate will be increased over the previous school year in which the traditional school calendar was followed.
- HA₂ There will be a higher school retention rate than in a comparable community in which the traditional school calendar is followed.
- HA₃ School retention rate will be increased in communities which have a common industrial-agricultural cycle.

Sample:

1. Type:
 - 1.11 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.
 - 1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting point to identify the high, middle, and low income groups.

- 1.12 Blocked on sex.
 - 1.2 Stratified by three eco-types (differential production cycles).
 - 1.21 Rice
 - 1.22 Plantation
 - 1.23 Other (i.e. Fishing)
2. Purposive:
 - 2.1 Geographical distribution
 - 2.2 Accessibility of school
 - 2.3 Local sanctioning
 - 2.31 Bupati
 - 2.32 Camat
 - 2.33 Lurah
 - 2.4 Local community channel has ability to execute thru L.S.D., ninik mamak, etc.
3. Hold at 80 per cent on the follow-up sample of drop-outs.
4. Obtain 1976 drop-out data for selection of low retention schools.
5. Develop provisions for local school attendance record keeping.

STRATEGY VIII

NON-FORMAL EDUCATION

Operational Statement:

The development and implementation of a new non-formal education strategy to alter parental valuation toward positive acceptance of the importance of primary education for their children, as well as to insure the concomitant communication of this valuation to (and among) their children.

Assumptions:

1. That a positive change in parental valuation of education with increased reinforcement (communication) of that valuation to their children in the home will effect school retention positively.
2. That a positive change in student peer valuation of education with increased reinforcement (communication) of that valuation in school will effect school retention positively.
3. That a Non-Formal Education content and delivery system can be developed to effectively and efficiently (costwise) provide the impetus for impacting the above desired home and classroom normative climate changes and realize the increased retention rates desired.

education by parents over a context in which the perceived education-work related opportunity structure (existing or emergent) is extremely limited.

Sample:

1. Type:

1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.

1.11 Each individual school classified by SPP scale for that school. Arbitrary select a cutting point and choose all schools having similar SPP fees.

1.12 Blocked on sex.

1.2 Stratified by:

1.21 Open opportunity structure.

1.22 Closed opportunity structure.

Limitations:

1. Parents may not be willing or able to participate in NFE programs.
2. That students and teachers will be receptive to NFE strategies, i.e., career days, games, etc. for the promotion of classroom climate valuing education.
3. That parent "true values can in fact be measured and are in need of modification.
4. That the communication of this parental (and peer) valuing of education, once established, can be effectively propagated.
5. That the reality of the level of development and employment prospects in the experimental area are in indeed so low that it does not warrant a false valuation of education in relationship to the world of work.

Hypotheses:

- HA₁ If a new, NFE treatment is implemented to favorably dispose parents and students valuing of primary education then the parents and students valuing will be more favorably disposed at the end than at the beginning of the treatment.
- HA₂ If parent and peer values (student values) are favorably disposed then school retention rates will increase in the second year for the project over the first year and in a comparable control group.
- HA₃ If there is a perceived education-work related opportunity structure (existing or emergent) then there will be higher valuation and/or growth in the positive valuation of

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati

2.32 Camat

2.33 Lurah

2.4 Local community channel has ability to execute thru
L.S.D., ninik mamak, etc.

3. Hold at 80 per cent on follow-up on sample.

4. Obtain 1976 drop-out data for selection of low retention
schools.

5. Develop provisions for local school attendance record
keeping.

STRATEGY IX

AN INTERACTION STRATEGY:

FINANCIAL ASSISTANCE AND COMPULSORY EDUCATION

Operational Statement:

1. Provide the primary school with free fees (SPP) for all children in grades 1 through 6.
2. A government decree and rationale stipulating that all children of school age in grades 1 through 6 will attend school.

Assumptions:

1. A decree and accompanying rationale for compulsory education will have limited impact on increasing school retention unless some provision is made to help with the financial burden to the parents for sending their children to school.
2. Children stay out of school because their parents cannot afford to pay the direct and indirect costs (fees-SPP).
3. The most expensive fee is the SPP, therefore, the SPP is the most crucial and should be eliminated.
4. Of the possible financial strategies, we assume the covering of the SPP is the most cost-effective, technically feasible, and the alternatives will have the broadest impact of the identified alternatives.

5. The high income group has a high retention rate and the SPP is not a major factor in the children attending school. Therefore, it is assumed that a treatment to eliminate the SPP will have no impact on the high income group.
6. If compulsory education is decreed by the government, the parents will comply by sending their children to school.
7. The rationale will be sufficient to convince the parents that they should comply with the decree.

Limitations:

1. The basic limitation of this strategy is the assumption that such a decree and attended rationale has the power to change the peoples behavior. (Given the psychology of the Indonesian people it seems likely their response will be favorable).
2. Socio-economic and cultural factors interact with the strategy to act as a constraint on the peoples ability to follow this decree.
3. The indirect costs may be so high that the family may not be able to keep the child in school even with the elimination of the SPP fees.

Hypotheses:

If a government decree and rationale stipulating compulsory primary education and payment of SPP fees for grades 1 through 6 is issued then:

HA₁ A higher proportion of students will remain in school

than have in the past when no such action was taken.

HA₂ A higher proportion of students will remain in the experimental school than in a comparable school in which no such action is taken.

HA₃ If compulsory education is decreed and the primary school SPP fee is eliminated, the affect on retention rate will be proportionately more dramatic for the low income group rather than for the high income or middle income groups.

NOTE: Data should be collected on grade repetition for this strategy but the strategy is not directed at the problems of promotion, therefore, hypotheses about promotion are not formulated.

Sample:

1. Type:

1.1 Stratified by income and based on the eleven step SPP scale for high, middle, and low income groups.

1.11 Each individual school classified by SPP scale for that school. Arbitrary select cutting points to identify middle income groups.

1.12 Blocked on urban/rural settings.

1.13 Blocked on sex.

2. Purposive:

2.1 Geographical distribution

2.2 Accessibility of school

2.3 Local sanctioning

2.31 Bupati

2.32 Camat

2.33 Lurah

2.4 Payment of fees and no compulsory education decreed.

3. Hold at 80 per cent of follow-up on sample of drop-outs.

4. Obtain 1976 drop-out data for selection of low retention schools.

5. Develop provisions for local school attendance and grade repetition record keeping.

OVERALL ANALYSIS
OF
THE PROJECT

The design, measures, sample, and method for data collection are detailed in the following section.

Basic Components:

The flow of the basic components of the experiment are detailed in Chart I . . . Stage one was completed by the preparation of two documents:

- 1) Toward a More Efficient Primary Education System:
An Experimental Approach to the Problems of Drop-
Out and Retention; and
- 2) Putus-Sekolah dan Mengulang-Kelas di Sekolah Dasar (SD)
Masalah Dan Saran Pemecahan (Review of Research)

Stage two, the research design and proposal, will be completed when this report is finished and funds are allocated through various agencies. Stage three, field preparation, will have to include two components. First, of course, the contracting agencies will have to prepare for executing the project. Second, preliminary data, will have to be gathered on potential participating schools. It will be particularly important to gather data on the drop-out rates for the year preceding the study. This data will not be completely valid because the reason or reasons for dropping out of school may not be known. However, over a period of time, the data will provide

C H A R T I
 PROJECTED FLOW OF MAJOR COMPONENTS
 OF THE EXPERIMENT

TIME ACTIVITIES	1975		1976	1977	1978	1979	1980	1981
	Jan	Sept	June					Dec
1. Research Preparation		—						
2. Research Design/ Proposal			—					
3. Field Preparation/ Preliminary Data Collection (i.e. Drop-outs, income, SPP).			—					
4. Experiment				—	—	—		
5. Analysis/ Reporting					—	—	—	

crude evidence for checking the effect of the various strategies. Four, the various components of the experiment will have to be adjusted to the field conditions and executed. It will be extremely important that the BP3K establish in fact that all treatments are conducted as defined in the strategy section of this report. Five, and finally, the data will have to be analyzed and reported in a form which relates to formulation of policy in the Indonesian government.

Basic Design:

The design of the study maybe illustrated as shown in Diagram 1. The basic components will be generated to grade levels, income levels, open and closed opportunity structures, and rural and urban settings depending upon the design for each of the strategies.

The design is not a true experiment because schools will not be assigned to treatment and control groups randomly. Because of this limitation, two forms of control groups are proposed. One, an "Own-Control" group which employs the data for the previous year to initiate the strategy as a base line statistic. Such a selection carries at least two serious limitations. One, the initial data maybe invalid because of the absence of accurate categories in the school reporting forms. Two, extraneous factors outside of the control of the experiment may account for the recorded differences. A second type of control will be to select a comparable school in which the strategy will not be initiated. Again, this type of control has serious limitations. Trying to determine comparability is not a small task. The many factors which determine the availability for

DIAGRAM I

BASIC DESIGN OF
THE STUDY

Own Control	Experimental Group
O_1 X_c	O_2 X_e O_3
O_1 X_c	Control Group O_2 X_c O_3

X_c = Traditional pattern

X_e = Experimental strategy

$O_1 \dots 1$ = Observations

* Note: Design does not include random selection of schools.

the strategies may be the crucial elements which produce the most change. Thus, when the strategies are replicated on new groups, the positive results tend to diminish. By combining both a pre and post test design with repeated measures a better estimate of the effects can be made of the experimental treatments.

An outline of how the data will be gathered is illustrated in Chart II. As can be ascertained from Chart II, data collection starts with two sources:

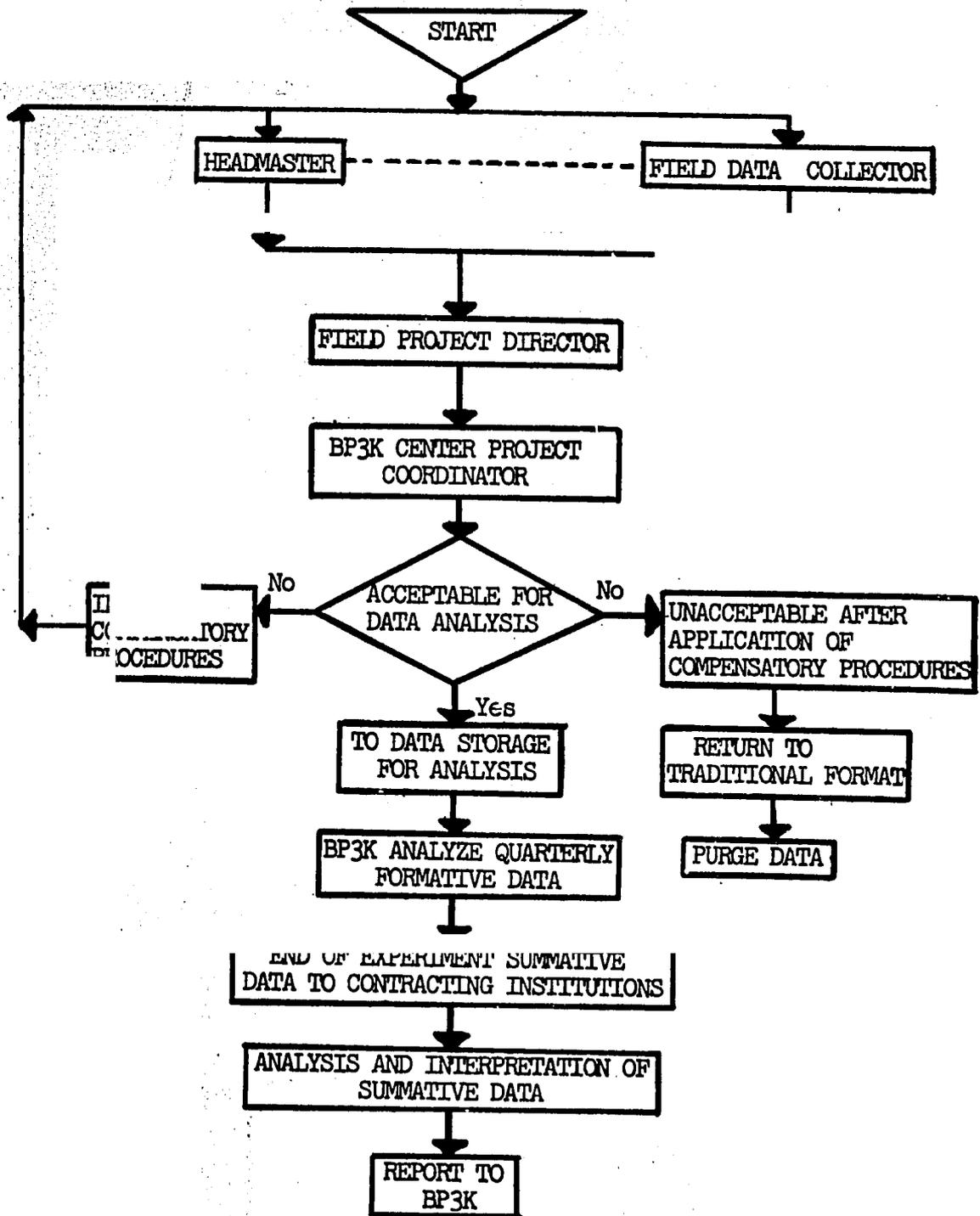
- 1) The headmaster of the school,
- 2) The field data collector.

The field data collector will have to gather data on the parents initial attitudes toward education and then establish in cooperation with the headmaster a flagging system to indicate that a student has:

- 1) Dropped out of school.
- 2) Has repeated a grade.
- 3) Has received various forms of the treatment strategy.

The recorded reason for leaving school or repeating a grade must be expanded and clarified. The field project director will then assemble the data, probably on a quarterly basis, and forward the data to the BP3K office. If the data is acceptable, the BP3K will conduct a quarterly formative or initial and tentative analysis. At the end of the experiment, the quarterly data will be sent back to the sub-contracting institutions for summative analysis, interpretation, and reporting. If the data is not forwarded in an acceptable form, compensatory procedures will have to be initiated by the BP3K through

CHART I
 DATA FLOW OF
 THE PROJECT



the contracting institution. After compensatory measures are introduced and the work does not produce valid data, the BP3K and the cooperating institutions may elect to return the school to the traditional format and purge the invalid data.

Measures:

The types of criteria measures, how they will be measured, and by whom are explained in Chart III. The headmaster of the school will be responsible for forwarding the name of any student who drops-out of school. The record book has a space for stating the reason. However, this is a loosely used category. The field researcher and the cooperating institution must work with the headmaster to obtain a valid reason from the teacher and fellow students for the drop-out leaving school. Certainly many students will drop-out of public school and re-enter the educational track at another public school or a private school. These students who stay in the educational track must be identified because they cannot be classified as drop-outs. The final validation of the reason for dropping out will be the responsibility of the field researcher.

To increase the validity of the data the contracting institution should re-interview about 10 per cent of the sample with a second field researcher. The field research should be informed that a follow-up or cross check of his/her data will be done during the project. The name of the individual responsible for the cross check should not be revealed to the original field researcher.

The data concerning the repetition of a grade as well as the reason for the repetition should come from the headmaster. However, the

CHART III

TYPES OF CRITERIA MEASURES AND
RESPONSIBILITY

CRITERION MEASURE	HOW MEASURED	PRIMARY RESPONSIBILITY
1. Drop-out Rate	Number of Students per Class Size	Headmaster
2. Reason for Drop-out	Semi-structured Interview with student, parent, or close relative.	Field Researcher
3. Grades Repeated	Number of students repeating each grade level- 1 thru 6.	Headmaster
4. Reason for Repeating Grade	Structured check list	Headmaster
5. Parental Attitudes toward Education	Short questionnaire probably semi- structured	Field Researcher
6. Achievement in Bahasa Indonesian	Standardized Achievement test	Field Researcher

headmasters reasons will have to be closely monitored to be certain that they are interpretable.

The survey of parental attitudes toward education will have to be administered to parents of the primary children in schools where the non-formal education strategy is applied. The responsibility for giving this survey to the parents will fall on the field researcher. It would be best if the survey could be given to all parents of children in the experimental and control schools. Therefore, the "spill-over" affect of the program can be measured (i.e. if parents not in the program change their attitudes toward education, then inferences can be made about the program spreading out into the community).

Achievement in Bahasa Indonesian will be measured by a standardized performance test developed by the BP3K. This measure is completed for most of the upper elementary school grades and should be available for all children in primary school by the time the project has begun.

The type of measure employed in each strategy is summarized in Chart IV-V. Numbers of drop-outs and the reason for dropping out will be collected for all nine strategies. The number of grade repeaters and the reasons for repeating a grade will be collected for all strategies, but not analyzed for strategies two and four which involve automatic promotion as policy.

Parental attitudes towards education will be measured as one of the criteria for assessing the effectiveness of the non-formal education strategy. Because intensification of teaching Bahasa Indonesian implies that the students should achieve better in the

CHART IV
 TYPE OF MEASURE NEEDED FOR
 EACH STRATEGY

TYPE STRATEGY	No. of Drop-outs	Reason for Dropping out	No. of Grades Repeated	Reason for Grade Repetition	Parent Attitude Toward Education	Achievement in Bahasa Indonesian
I. Remedial Instruction	X	X	X	X		
II. Automatic Promotion/4th Grade Certificate	X	X	*	*		
III. Intensification of Bahasa Indonesian	X	X	X	X		X
IV. Teacher Interchange	X	X	X	X		
V. Remedial Instruction and Automatic Promotion	X	X	*	*		

* Data should be collected to determine if automatic promotion is in force

CHART V
 TYPE OF MEASURE NEEDED FOR
 EACH STRATEGY

TYPE STRATEGY	No. of Drop-outs	Reason for Dropping out	No. of Grade Repeaters	Reason for Grade Repetition	Parent Attitude Toward Education	Achievement in Bahasa Indonesian
VI. Teacher Visitation	X	X	X	X		
VII. School/Time Adjustment	X	X	X	X		
VIII. Non-Formal Education	X	X	X	X	X	
IX. Financial Assistance/ Compulsory Education	X	X	X	X		

national language, a performance test will be administered (pre and post- by year) for all students receiving the third strategy.

Samples:

A detailed summary of the projected number of schools for each strategy may be found in Charts VI, VII, and VIII. A total of 438 experimental schools will be included in the project and an identical number of control schools will be selected for each site (A total of 876 experimental and control schools will be included in the overall project).

For West Central and East Java and South Sulawesi all of the experimental strategies will be implemented. Each University will be responsible for 42 experimental schools and each IKIP will be responsible for 48 experimental schools. In addition, they will monitor an equal number of control schools. Strategy three, Intensification of Instruction in Bahasa Indonesian will not be implemented in West Sumatra because their language is either identical to or very similar to Bahasa Indonesian. Furthermore, in West Sumatra the strategy of teacher visitation may not be implemented because the enforcement of this regulation may be wide spread. (In fact, the strategy was developed because the consulting team observed that this regulation was in force in Padang and seemed to produce dramatic and positive results). If schools cannot be located, in West Sumatra, where the regulation is not enforced, then this strategy will not be implemented.

Data Reporting:

Forms for reporting data will have to be standardized throughout

C H A R T V I

PROJECTED NUMBER OF EXPERIMENTAL SCHOOLS FOR

EACH STRATEGY BY LOCATION

STRATEGY	TYPE OF SAMPLE	WEST JAVA		CENTRAL JAVA				EAST JAVA		SOUTH SULAWESI				
		IKIP BANDUNG		UGM		IKIP SEMARANG		IKIP SURABAYA		UNHAS		IKIP UJUNG PANDANG		
		U*	R	U	R	U	R	U	R	U	R	U	R	
I. Remedial Instruction	High		2	2			2	2			2	2		
	Middle		2	2			2	2			2	2		
	Low		2	2			2	2			2	2		
II. Auto. Promo/ 4th grade certificate	High		2	2			2	2			2	2		
	Middle		2	2			2	2			2	2		
	Low		2	2			2	2			2	2		
III. Intensification of B. Indonesia	High		2	2			2	2			2	2		
	Middle		2	2			2	2			2	2		
	Low		2	2			2	2			2	2		
IV. Remedial Teach. Auto. Promo.	High		2	2			2	2			2	2		
	Middle		2	2			2	2			2	2		
	Low		2	2			2	2			2	2		
V. Teacher Interchange	High	2	2		2	2			2	2			2	2
	Middle	2	2		2	2			2	2			2	2
	Low	2	2		2	2			2	2			2	2
VI. Teacher-Home Visitation	High	2	2		2	2			2	2			2	2
	Middle	2	2		2	2			2	2			2	2
	Low	2	2		2	2			2	2			2	2
VII. School/Time Adjustment	Rice	2	2		2	2			2	2			2	2
	Plantation	2	2		2	2			2	2			2	2
	Other	2	2		2	2			2	2			2	2
VIII. Non-Formal Education	Open	2	2		2	2			2	2			2	2
	Closed	2	2		2	2			2	2			2	2
IX. Financial Assist./ Compulsory Ed.		2	2		2	2			2	2			2	2
TOTALS		18	24	24	24	18	24	24	24	18	24	24	24	24

* Note: U = Urban R = Rural

C H A R T V I I I

PROJECTED NUMBER OF EXPERIMENTAL SCHOOLS FOR
EACH STRATEGY BY LOCATION

STRATEGY	TYPE OF SAMPLE	WEST SUMATRA		IKIP PADANG	
		UNAND		URBAN	RURAL
I. Remedial Instruction	High			2	2
	Middle			2	2
	Low			2	2
II. Auto. Promotion/ 4th grade certificate	High			2	2
	Middle			2	2
	Low			2	2
III. Intensification of Bahasa Indonesian	High				
	Middle				
	Low				
IV. Remedial Teach./ Automatic Promo.	High			2	2
	Middle			2	2
	Low			2	2
V. Teacher Interchange	High	2	2		
	Middle	2	2		
	Low	2	2		
VI. Teacher Home Visitation	High	2	2		
	Middle	2	2		
	Low	2	2		
VII. School/Time Adjustment	Rica		2		
	Plantation		2		
	Other		2		
VIII. Non-Formal Education	Open	2	2		
	Closed	2	2		
IX. Financial Assistance/ Compulsory Education		2	2		
TOTALS		18	24	18	18

C H A R T V I I I

TOTAL OF PROJECTED NUMBER OF EXPERIMENTAL SCHOOLS
FOR EACH STRATEGY BY LOCATION

STRATEGY	TYPE OF SAMPLE	URBAN RURAL		TOTAL	GRAND TOTAL
		TOTALS	TOTALS		
I. Remedial Instruction	High	10	10	20	60
	Middle	10	10	20	
	Low	10	10	20	
II. Auto. Promo. 4th Grade certificate	High	10	10	20	60
	Middle	10	10	20	
	Low	10	10	20	
III. Intensific. of Bahasa Indonesian	High	8	8	16	48
	Middle	8	8	16	
	Low	8	8	16	
IV. Remedial Teach/Auto. Promotion	High	10	10	20	60
	Middle	10	10	20	
	Low	10	10	20	
V. Teacher Interchange	High	10	10	20	60
	Middle	10	10	20	
	Low	10	10	20	
VI. Teacher Home Visitation	High	10	10	20	60
	Middle	10	10	20	
	Low	10	10	20	
VII. School/Time Adjustment	Rice		10	10	30
	Plantation		10	10	
	Other		10	10	
VIII. Non-Formal Education	Open	10	10	20	40
	Closed	10	10	20	
IX. Financial Assistance/ Compulsory Education		10	10	20	20
TOTALS		204	234	438	438

the project. It would be best if all data were passed through the system and stored in one location until the completion of the study. It may be that BP3K will want data to come from the field and participating institutions in a form such as illustrated in Chart IX.

For the purpose of maintaining adequate identification of all data gathered in the study, it must be emphasized that all personnel- field, participating institutions, and BP3K- should carefully identify in detail the nature of the data, who gathered it and when it was gathered. With a project of this magnitude the data management process will be extremely demanding.

Type of Analysis:

Four of the criteria measures are frequency counts. Parental attitudes towards education holds the possibility of being an interval measure. Caution will have to be taken not to employ statistical models which exceed the sophistication of the design and the pragmatic purposes to which the data will be subjected. For the first four measures some form of non-parametrics such as chi-square or the significance of the difference between percentages might be applied. The parental attitudes survey and achievement in Bahasa Indonesian might be appropriately analyzed by analysis of variance.

Two notes of caution should be heeded:

-) If only a few significant differences are observed the alpha levels of making a type one error (rejecting a null hypothesis when in fact it should have been accepted) should be closely examined. It may be that so many experiments are being conducted that the one in twenty by-chance observation appeared.

CHART IX
 DATA REPORT FORM
 FROM PARTICIPATING INSTITUTIONS

REPORTING INSTITUTION _____

QUARTER _____

NATURE OF DATA _____

DATE _____

FIELD SUPERVISOR _____

GRADE	INCOME	SCHOOL ONE	SCHOOL TWO	SCHOOL THREE	SCHOOL N
1st	HIGH MIDDLE LOW				
2nd	HIGH MIDDLE LOW				
THRU 6th	HIGH MIDDLE LOW				

- 2) If percentages are used to summarize the data, corresponding frequencies in all cases should be reported so that future researchers can arrive at their own interpretation of the data.

Implementation:

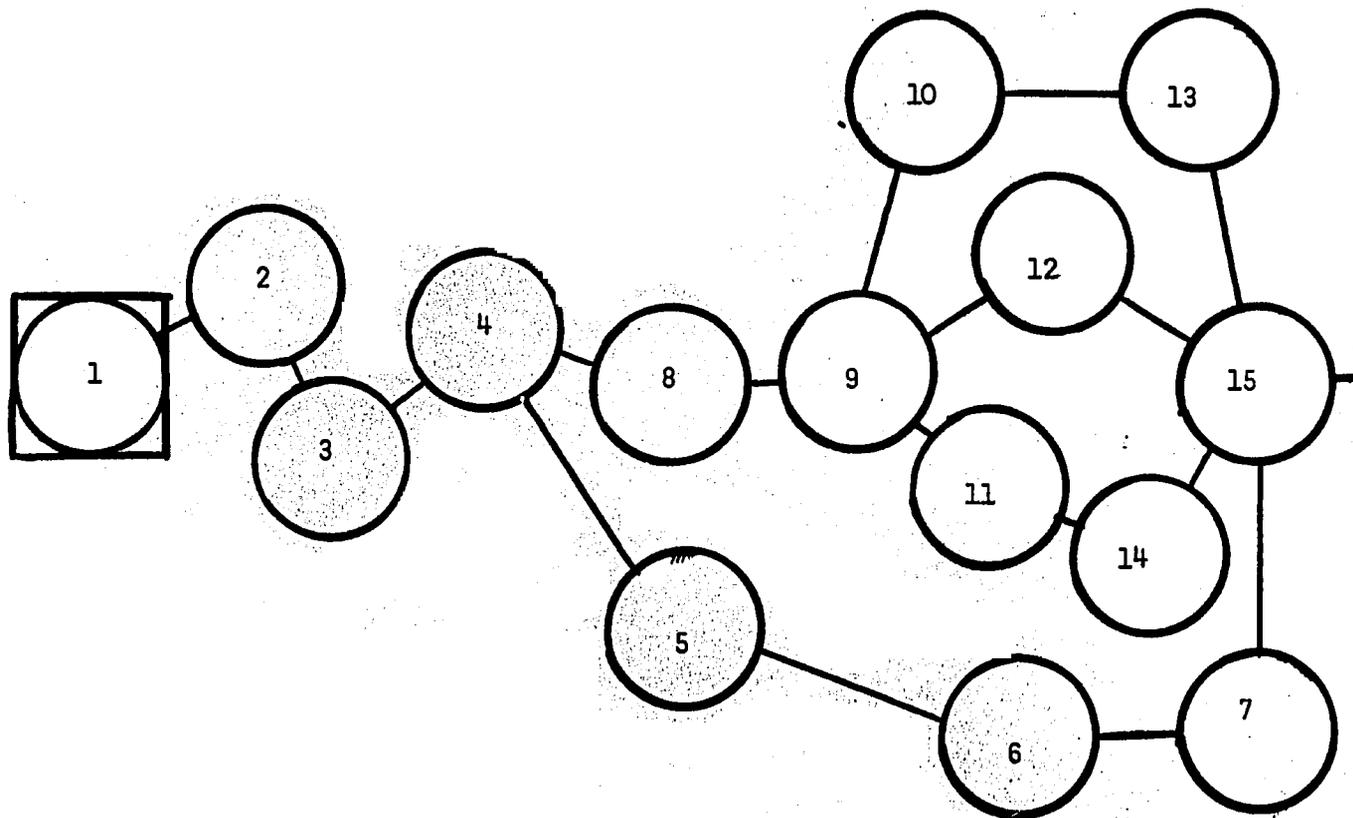
An experimental project of this magnitude requires a considerable amount of time to implement effectively. Therefore, a minimum of six months should be used to:

- 1) Design, organize, and operationalize the administrative and communication channels;
- 2) Identify, select, and train the necessary personnel to conduct the study;
- 3) Design, test, and revise the data collection instruments; and
- 4) Establish a data base for the selection of the experimental and control sites.

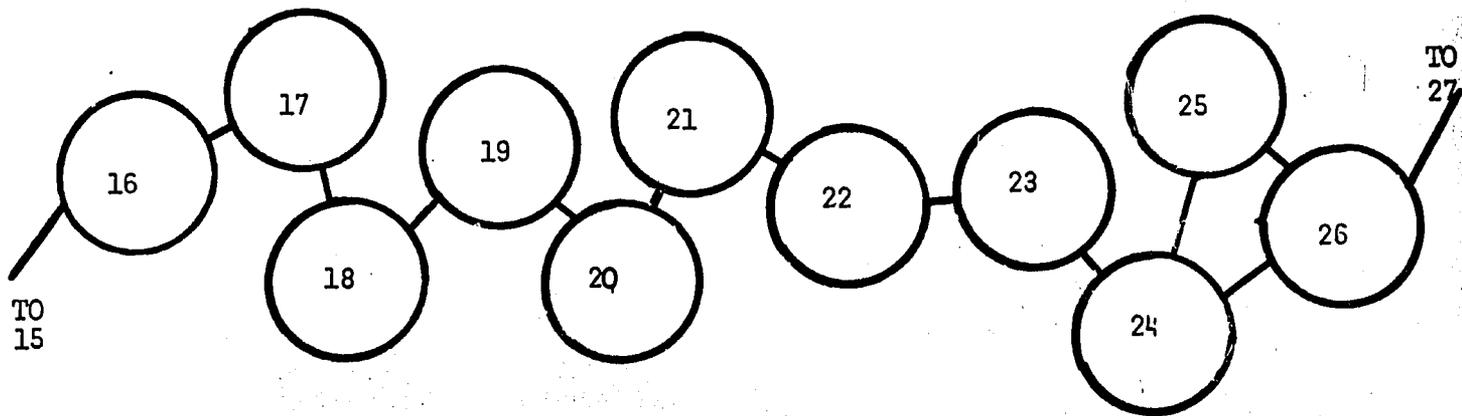
NOTE: An attempt to implement the experimental treatments in less time may result in a poorly designed administrative network, ineffective field supervisors, and an insufficient data base.

The following PERT network and Diagram of the Communication network are general suggestions for program implementation. These generalized statements must be formulated into specific steps for each section and then carefully developed before progressing with the project.

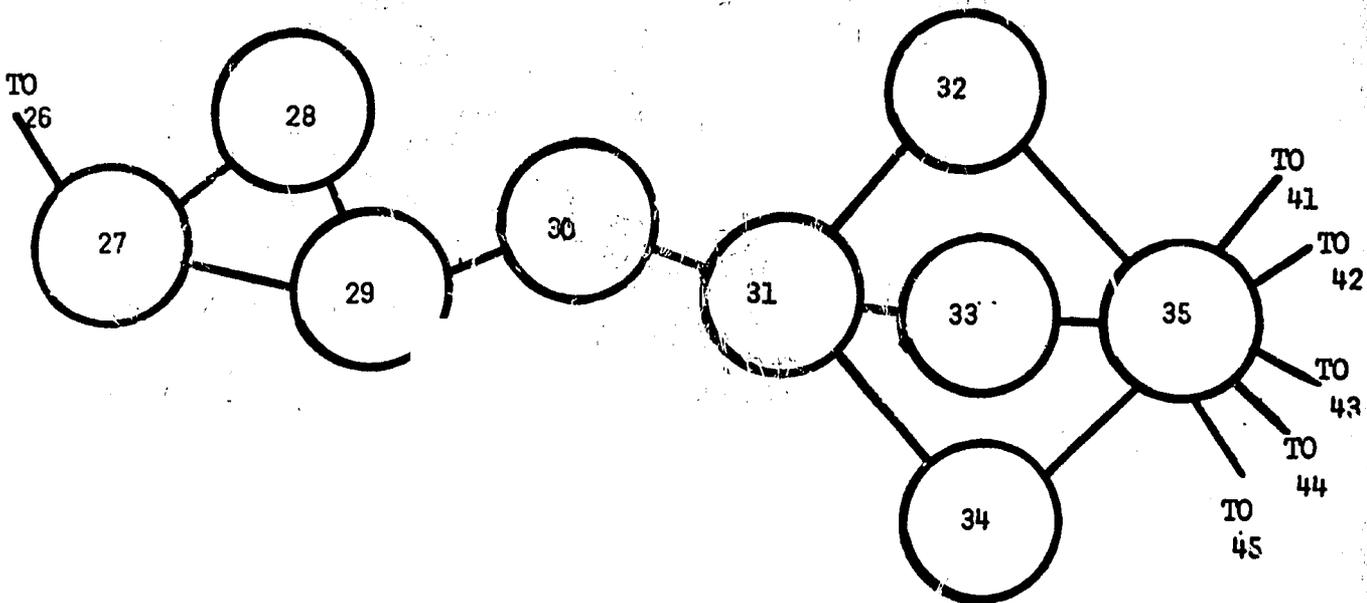
When the final network is constructed the description of each step should be written into the PERT Chart. This PERT Chart should then be posted for general inspection and review.



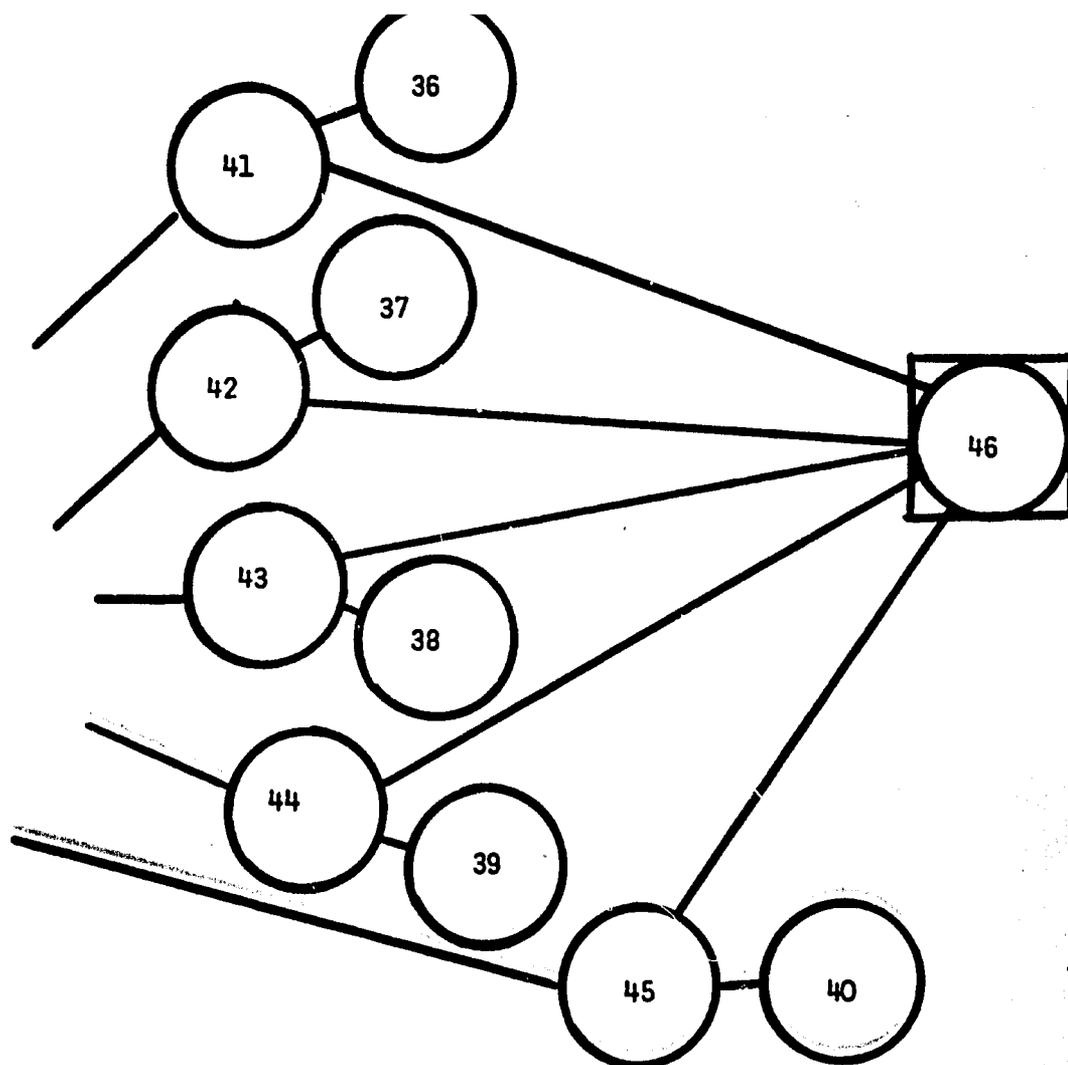
1. Set up Administration group at BP3K.
2. Identify individual at BP3k responsible for each Sub-contract.
3. Design administrative communication channels (Headmaster-BP3k.).
4. Select Sub-contractors (i.e. IKIPS).
5. Design data collection instruments for drop-outs.
6. Field test instruments.
7. Revise instruments.
8. Identify head of project at Sub-contract level.
9. Establish administrative group at Sub-contract level.
10. Identify field supervisors.
11. Identify field data collectors
12. Organize training sessions for administrators at Sub-contract level.
13. Organize training sessions for field supervisors.
14. Organize training sessions for field data collectors.
15. Conduct training sessions.



16. Organize trial data collection on drop-outs at Sub-contract level.
17. Collect trial data
18. Analyze trial data at Sub-contract level.
19. Hold workshop on trial data with field supervisors, field data collectors and administrators at Sub-contract level.
20. Select school sites.
21. Identify headmaster at each school site,
22. Organize training session for headmaster at Sub-contract level.
23. Conduct training session.
24. Initiate 1976 data collection at school sites (Sub-contract level).
25. Monitor data collection with field visit by BP3K once every two months.
26. Collect data for six month period.

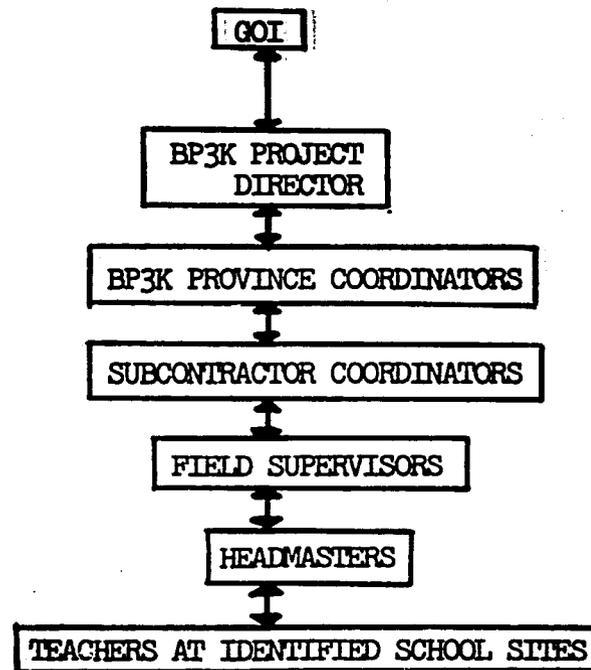


27. Key punch data.
28. Store Data.
29. Analyze data at Subcontract level.
30. Send analyzed data to BP3K.
31. BP3K check analyzed data.
32. Subcontractor and BP3K identify experimental sites.
33. Subcontractor and BP3K identify control sites.
34. Revise instrumentation if necessary.
35. Notify all sub-contractors and schools of changes in instrumentation.

TO
35

- 36. Monitor treatment implementation at school site. (Province I)
- 37. Monitor treatment implementation at school site. (Province II)
- 38. Monitor treatment implementation at school site. (Province III)
- 39. Monitor treatment implementation at school site. (Province IV)
- 40. Monitor treatment implementation at school site. (Province V)
- 41. Initiate treatments at subcontract level to individual schools. (Province I)
- 42. Initiate treatments at subcontract level to individual schools. (Province II)
- 43. Initiate treatments at subcontract level to individual schools. (Province III)
- 44. Initiate treatments at subcontract level to individual schools. (Province IV)
- 45. Initiate treatments at subcontract level to individual schools. (Province V)
- 46. Initiate data collection for experimental treatment.

CHART X
SIMPLIFIED CHART FOR AN
ADMINISTRATIVE COMMUNICATION CHANNEL
NETWORK



FINAL ANALYSIS
AND
POLICY RECOMMENDATIONS

A crucial aspect of the project is to relate the findings to policy-making decisions. Certainly, some of the policies will be enacted whether confirming data is found or not. Other policies will be lowered in priority because of political reasons despite data which indicates a high chance of success. Conversely, some policies will be elevated in priority even when the data indicates a low chance of success or little effect in influencing student retention. It is not within the scope of the project to sort the political implications of the strategies. However, it is within the scope of the project to articulate the findings with projected strategies and Policies.

How the findings are interpreted depends upon the BP3K and the contracting agencies. Each agency will be responsible for analyzing their own data and writing an interpretation of their findings.

Basically, they will want to answer the following:

- 1) Did the strategies work? Why? Why Not?
- 2) How was the strategy implemented? Problems encountered?
- 3) How much did it cost?

Furthermore, they should have a section in their report to elaborate the implications of their study for policy formulation in their locality. The BP3K will have the task of integrating the findings

of the ten contracting institutions. It may be found that one strategy will work regionally but not across regions, or that a particular strategy has no measureable impact. Thus, the BP3K will need to integrate such findings and examine all conclusions for policy-makers.

FURTHER TECHNICAL INPUTS AND NEEDED RESOURCES

In order to conduct a project of this magnitude a number of consultants, national and international, will be needed during the two year period.

National Consultants:

Subcontracting is an efficient and effective way for the BP3K to complete the designated tasks. Additional consultants will be needed, throughout the project, in the following areas:

1. Statistics
2. Research Methodology
3. Educational Processes
4. Systems Management

International Consultants:

International consultants would be of help during three period in the project (beginning, mid-point, and end). It is suggested that the international consultants come for a three month period around:

1. The beginning date of the project, January, 1977;
2. A similar time in 1978; and
3. The last four months of the project in 1979.

A summary of the visitations and examples of the projected tasks may be found in the following chart. (Chart XI)

CHART XI

SUMMARY OF INTERNATIONAL CONSULTANTS
VISITATIONS AND EXAMPLES OF PROJECTED TASKS

3 Months	3 Months	3 Months
1977	1978	1979
<ol style="list-style-type: none"> 1. Design data collection forms and criteria measures. 2. Help select school sites. 3. Design in detail a data bank-income flow from field. 4. Design system to train personnel to gather data. 5. Help design the non-formal education components. 	<ol style="list-style-type: none"> 1. Evaluate progress of project- Help analyze first years data. 2. Re-design elements which are not functioning. 3. Project final products with contracting institutions. 4. Write preliminary Report. 	<ol style="list-style-type: none"> 1. Help with analysis of data. 2. Help in synthesizing field data. 3. Build policy implication strategies. 4. Help design next project.

IMPROVING THE LIFE OF
THE RURAL POOR

The rural poor have one of the highest primary education drop-out rates of any group in Indonesia. Important aspects of this project are, therefore, directed towards:

- 1) Increasing the retention rate in rural settings.
- 2) Developing alternative strategies to help keep the children of rural residents, with limited funds, in school.

For these reasons, the project has particular relevance to helping improve the status of the rural poor in Indonesia.

ROLE OF WOMEN IN THE
DEVELOPMENT OF INDONESIA

The school drop-out rate for females is slightly greater than that for males in most geographical locations in Indonesia. Furthermore, fewer females than males enroll in school in the rural areas. If entry to and retention in the educational system is curtailed for women then their contribution to the development of Indonesia is also blocked. This project is designed to attack the school drop-out rate of both sexes, but may have the most impact on females because of their higher percentage of drop-outs.

FURTHER DIRECTIONS

FOR STUDY

This study may be viewed as one in a projected series to reduce or eliminate some of the educational problems in Indonesia. Because of such constraints as money, time, and National urgency, many potentially effective strategies were not incorporated into the design of this project. Alternative strategies are listed in Chart XII for future consideration. The chart provides ideas which are economic, cultural, and political in nature. The BP3k should examine them carefully as possible sources of new strategies to eliminate or reduce the problems found in the Indonesian Educational System.

The next most logical step would be to apply the nine strategies of this study to the junior and senior high schools. The strategies would have to be adapted to the specific problems of older children.

It would be a great help if action research could be designed to attack two of the most pressing problems in Indonesian primary education.

- 1) School stay-outs: Estimates run as high as 15 per cent for the number of children who never enroll in primary school. Indonesia is making rapid progress in providing facilities for their children. Unfortunately, much still remains to be done.
- 2) Teacher absence: Estimates run as high as 40 per cent for teachers not being in the classroom. The impact of this modeling of the teachers on the students may be much greater

CHART XII
 POTENTIAL STRATEGIES TO
 INCREASE SCHOOL RETENTION IN
 THE SCHOOLS OF INDONESIA

Financial Strategies:

Family Planning	Voucher System
Child Labor Laws	School Lunch Program-Nutrition
Increase in Teacher Wages	Day Care Centers
Improve the General Economy	Student-Teacher Ratio
School Facilities (Location)	
Indirect Costs (Travel to and from school, books, supplies)	
Direct Payment to Parents to Compensate for Child Labor Loss	

Remedial Instruction:

Primary school Equivalency (Exams, Materials-Delivery)

Automatic Promotion:

Good Attendance Certificate

Non-Formal Education:

Homebound Education
 PTA (School Parent Organizations)
 Community Involvement

Indonesian Language:

Bilingual Education
 Multicultural Education

In School Process:

Assessment or Evaluation System	Resource Utilization by Administration
Variation in Levels of Materials	Integrated Curriculum
Peer Teaching	Teacher Training: (Pre-service,
Tutoring	In-service)
Paraprofessional	Student/teacher Ratio
Pre-School Education	Teaching Methodologies
Parent Aides	Self Concept of the Child
Curriculum Reform	Self Concept of the Teacher

than any other factor which generates school drop-outs. Many forces contribute to producing this problem (i.e. low wages, low levels of professionalism, low status). Action strategies are critically needed to reduce teacher absences. A strategy to improve teacher attendance should contain:

- 1) a decree with accompanying rationale that teachers will meet their classes.
- 2) a statement of how many sick or personal leave days a teacher is permitted each year.
- 3) provisions for withholding the salary of teachers who miss more than their allotted sick and personal leave days.
- 4) methods of monitoring the accuracy of the headmasters records to determine which teachers miss which days.
- 5) methods for enforcing the decree.

The assumptions, limitations, hypotheses, and sample domains for this strategy should be developed prior to implementation.

Promotion Standards:

Research is needed on promotion policies. There are no uniform standards to determine if a student should pass from one grade to the next. The criteria appears to vary considerably from school to school. Because the grade repetition rate is high, it would be valuable to know more about the standards.

- 1) What are the standards employed by various schools.
- 2) If a standardized achievement test were employed as a promotion criteria, would the same students pass and fail.

From such knowledge new practices could be adopted which might reduce the failure rate and increase school retention.

MONITORING THE IMPLEMENTATION PROCEDURES AND COSTS

In addition to determining the effects of the various strategies there is a crucial need to examine the processes of implementation and costs. One person should be responsible for monitoring the project processes at the BP3K and at each of the ten contracting agencies. Every two months, a report should be filed with the BP3K from the field on such components as:

- 1) Corrective procedures initiated.
- 2) Factors of success and failure.
- 3) Problems encountered.
- 4) Nature of cooperation.
- 5) The field supervisors opinions concerning the project.
- 6) A description of the overall process.
- 7) Recommendations for change.

It would be desirable to conduct training sessions with the ten field supervisors and the BP3K representatives. In the initial sessions, the components to be examined should be developed in a structure which will facilitate uniform reporting from the field. However, the forms should not be highly structured because they would then interfere with the scope of the elements monitored and the free flow of information from the field to the central office. At the end of the project, each contracting institution representative should prepare a narrative report (under standardized headings) in which the implementation process is described in detail. Thereafter, the

BP3K representative could write a synthesis of all ten reports.

This part of the project is formulated as a descriptive, managerial study. Therefore, specific research hypotheses will not be generated.

The monitoring aspect of the study must have a delicate balance between:

- 1) Obtaining sufficient information to adequately describe the implementation processes; and
- 2) Proliferating paper and/or "busy" work which will distract from the overall purpose of the project.

Cost of the Project:

In order to develop a budget, the project elements and costing elements for each strategy and location should be estimated (Chart XIII).

Such a chart can clarify:

- 1) Who is responsible for each element of the budget
- 2) What the projected cost of each strategy might be

In budgeting, it is important that the cost of the project does not exceed the original estimates. Therefore, the experimental and control schools should be located reasonably near the contracting agencies because these schools will have to be visited frequently during the project. The details of the cost of the project for each contracting agency will have to be developed when the total project is funded. All costs will conform to the overall budget which is presented in Chart XIV.

In Chart XIV eleven major categories are budgeted for both the Indonesian Government and USAID. All Indonesian costs are figured in Rupiah's (415 Rp. per \$1.00) and USAID costs are figured in dollars. The total project is estimated to cost 222,025,000 Rp. or \$535,000.

COST ELEMENTS	STRATEGIES								TOTAL
	I	II	III	IV	V	VII	VIII	IX	
<u>(Summative Analysis)</u> <u>BP3K</u>									
1. Staff									
2. National Consultants									
3. Field Supervisors									
4. Management									
5. Clerical									
6. Analysis (Summative)									
7. Reporting and Dissemination									
8. Travel/Subsistence									
9. Materials									
<u>International Consultants:</u> <u>BP3K</u>									
1. Travel									
2. Honorarium and Per Diem									

DATE: _____

CONTRACTING AGENCY: _____

REPRESENTATIVE: _____

COST ELEMENTS BY MAJOR CATEGORIES

CATEGORY	GOI (Rp)	USAID (\$)	TOTAL (Rp)
1. Preparation	5,350,000	-	5,350,000
2. Development of Instruments	800,000	15,000	7,000,000
3. Subsidy to 20 Schools for free Primary school exp.	10,200,000	45,000	28,800,000*
4. Supervision by BP3K (incl. travel and per diem)	5,850,000	10,000	10,000,000
5. Consultants			
5.1 International		65,000**	26,975,000
5.2 National	1,700,000	20,000	10,000,000***
6. Research workers- Administrators at BP3K	8,400,000	25,000	28,800,000****
7. Training (In-Country)	1,700,000	20,000	10,000,000
8. Subcontracts (5 universities and 5 IKIPS) covering experimental costs, monitoring costs, and formative analysis	7,500,000	175,000	80,000,000
9. Summative analysis (BP3K)	1,700,000	20,000	10,000,000
10. Reproduction- Dissemination	750,000	3,000	2,000,000
11. Unspecified Costs	2,300,000	2,000	3,100,000
TOTAL	56,250,000 (or \$ 135,000)	400,000	222,025,000

* 20 (schools) x 2 (years) x 12 (months) x 200 (students) x Rp 300 (SPP).

** About 7 mm at \$9,000 per month.

*** 50 mm at Rp 200,000 per month.

**** 150 mm at Rp 100,000 per month.

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APPENDIX A

FURTHER SUGGESTIONS FOR
THE NON-FORMAL EDUCATION TREATMENTCentral Question:

How to create a normative climate in the home and in the classroom environments which induces a positive attitude among students toward staying in school?

Objectives:

1. To promote the positive valuation of parents towards education and to increase the communication of this positive valuation to their children.
2. To promote the positive valuation of students toward education and to increase the communication of this positive valuation among them.
3. To develop and implement a non-formal education content and delivery system for accomplishing objectives one and two above.
4. To increase school retention rates in the treated populations.

Non-Formal Education Content:

The content is basically a set of "Rationales" or "Thematic Arguments" for staying in school.

The content (thematic arguments) should be presented in a logical format for both parent and student target populations.

1. Question(s) to introduce theme and stimulate discussion.
2. Argument of pros and cons as a discussion guide.
3. Conclusion.

The language and examples employed in the content should be consistent with the linguistic ability and experiences of the respective target populations. Wherever possible "thematic arguments" should be expressed in the language and manner of the target populations, consciously drawing upon concrete examples from the target population's life experiences.

The conclusions will always be fundamentally the same regardless of the target population, that is: "Staying in school can be of greater benefit than dropping out." The goal is to sanction retention and to stigmatize dropping out.

Some examples of the kinds of thematic arguments, remembering the logical format above, that must be drafted as content are as follows:

Example 1:

Question: What does the future hold for your child (for you,
(theme) for the students)?

Argument: Indonesia is a rapidly changing country. A major part of this change is increased mobility, new needs, and new types of work. The new types of work (jobs) will require new skills, especially linguistic and mathematical skills. Schools can provide your children these skills, thus help in their preparation for the new jobs. Those persons who stay in school and acquire these new skills will have the best chance of getting these new jobs.

Conclusion: There is a direct relation between the preparation that schools do and one's opportunity in a changing world of work.

Example 11:

Question: What is it that we want for our children?

(theme)

Argument: We are all seeking to improve our standard of living and that of our children. (Acquire better housing, clothes, food). Our lands are limited in that we cannot produce all of these things for our entire family as long as we have to continually divide the limited fruits of our effort among our many children. Some of our children will have to seek wage employment off of our lands or want to improve the quality of their lives in industry or business. Employment in industry or business may require new mental skills. The school can prepare your children for this type of employment by teaching these skills. If the child stays in school, the better prepared he will be and the greater chance he will have to get one of these jobs.

Conclusion: There is a direct relation between the preparation that schools do and one's opportunity in a changing world of work.

Other thematic questions to consider as a basis for constructing content (Rationales) are as follows:

1. What are the prohibitive factors in keeping a child in school and how might they be overcome?

2. Why is it OK among your classmates to drop-out of school?
Why should it not be OK on second thought?
3. How could you get your parents to see the importance of letting you continue your education?
4. Having contacts helps to get a job, but is it enough?
5. What are some of the consequences of dropping out at a certain grade versus staying in school to complete higher levels?

Packaging of the Content (Message):

The content, thematic arguments, can be presented in a variety of ways.
For example:

1. Gaming Approach Create a game called "Drop-out" or one called "Success" for both students and parents to play in the home or at school. The game would be a simple board game like monopoly which would illustrate the pros and cons of dropping out of school. IKIP Bandung and IKIP Malang have staff that could be paid to develop such a game and train facilitators to apply it in experimental communities (See A. Surjadi = Bandung or Saleh Marzuki in Malang). Applying the above principles, the facilitators may be parents, Dalangs, teachers or practically any existing role in the community to whom people will respect and listen. The facilitator would be trained to introduce the game and guide the discussion afterwards. Some of the contracting institutions might wish to consider the KKN program as an alternative source for facilitators.

2. Apperception-Interaction Methodology The content may be packaged in short stories accompanied by large photographs around which a discussion would be held. In this strategy a facilitator (local opinion leader) would be equipped with a couple of photographs of drop-outs idling away their time near a bar or daydreaming on the edge of a rice paddy. He would also be equipped with a story about the photographs which he would read to the group (parents, students). He would then lead a discussion about the photographs and story focusing on interpretation, comprehension, and generalization to their experiences. The examples of thematic arguments, given earlier, could readily serve with a picture and a good discussion leader (facilitator) to implement the package.

3. School-Based Career Education Approach Speakers may be invited into the school once a week in sort of a "Career Education Hour." They would have to be or hopefully become "role models" for the children as well as funnels of information on how they got where they are and the importance of schooling in that process.

4. Indigenous Media Strategy Entertainment, like a Wayang, might be held at the school with the expressed purpose of using either the Wayang itself or the specific situation to pass the message of the importance of school onto the parents in a soft manner.

5. Commercial-Based Career Education Approach A career education table manned by a local teacher in a pasar or a large poster or two pictorially illustrating the world of work along side pictures of graduates in their flashy caps and gowns with proud parents looking on.

Delivery System:

General Principles:

1. The effective delivery will necessitate trained facilitators to guide discussion about each of the above content packages.
2. The delivery system should make maximum use of local opinion leaders (people whom parents deem honest, believable, and trust). Examples include Lurah, Dalang, Anda, and Dukun.
3. The delivery system should make use of the existing networks of communication and social interaction such as arisan meetings, social palaver at local warungs, and folk media.
4. The determination of role, place, and time of delivery will always be dependent upon the existing local conditions (i.e. local use of time, local gathering places, respected roles in the society).
5. The multiple reinforcement of the message through as many diverse channels and in as many different environments i.e. home, school, pasar as possible is highly desired.
6. The linkage of the message to other related messages in a holistic pattern reflecting the reality of the setting and people is desirable, i.e. relating school skills to actual opportunity in a neighboring emergent industry.
7. That Content and Delivery be designed whenever possible with such local factors as the following in mind: Target population perception, motivation, attention span, learning style, cognitive style, etc.; Target population behavior with regard to cultural institutions (attitudes, tastes, frequency of interaction; Target population behavior with regard to external forces (i.e. government agents,

researchers, any injection from outside the community; the possibility of combining modern and traditional means of communicating, building on existing structures and roles in the community to play novel functions and convey new notions.



LOCATION OF EXPERIMENTAL AND CONTROL SITES