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ANNUAL REPORT SUMMARY SHEET

Development and Testing of Methodologies and Instruments
Project Title and Contract Number

for Evaluating Community Education Programs
Project Title and Contract Number

931-17-690-597-73

Project Title and Contract Number

Theo. James Pinnock - Tuskegee Institute
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Alabama 36088

Contractor's Address

June 28, 1976 - June 29, 1978 June 28, 1976 - June 30, 1977
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Through Previous Contract Year _____ N/A _____

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Narrative Summary of Accomplishments and Utilization

The objective of the literature review is to discover, describe and measure the determinants of the impact of rural community education programs in less developed countries at the levels of the individual, the community and the nation. It was thought that the literature review would reveal the state-of-the-art of developing measures--indicators--to more objectively assess program outcomes. The literature does

reveal that the process of developing ways of measuring variables salient to successful achievement of program goals and objectives is at best a nebulous one. The literature of community development and community education lacks an adequate theoretical base, and, in consequence, its concepts are indefinite, and its terminology is loose. The problem becomes more complicated terminologically when viewed internationally. The so-called indicator movement offers little more by way of precision. Essentially, most writers assert that an indicator is "a measure of the attainment of results." The problem here is not so much in the definition but what type of results--short or long range, summative or formative, qualitative or quantitative.

B. Project Objectives

The purpose of this research project is to develop and test evaluation tools, both instruments and methodologies, that can furnish more and better information for the rural community education program planner and implementor.

Generally the information to be furnished through the use of these evaluation tools will include data to:

- 1) Determine program impact on individuals, the community and the achievement of wider development goals.
- 2) Identify and assess effectiveness of various programmatic elements and their interaction with various community characteristics to assist planners to:

- a) Identify communities on the basis of their characteristics, in which a given type of education program would most likely meet with success, and
- b) Identify the optimum set of education program elements to ensure success given a specific set of community characteristics.

Specifically the project will develop:

- 1) A set of tested variables and appropriate indicators derived therefrom to measure the effectiveness of community education programs in terms of the effects upon individuals, the community and contribution to national or developmental goals.
- 2) A set of tested variables and appropriate indicators derived therefrom to describe programmatic elements of community education activities that are important indicators of success in achieving impact on the client group, the community and development goals.
- 3) A set of tested variables and appropriate indicators derived therefrom to describe the community characteristics that are important considerations when planning community education programs.
- 4) A set of measuring instruments, using several approaches such as interview observation, questionnaires, self-evaluation, etc., that will provide the information and data to measure the criteria specified in the project's purpose statement, and necessary to verify and modify 1 through 3.
- 5) Methodologies for the utilization of the above.

C. Accomplishments to Date*

Findings: The literature review suggests an evaluation model which is being described here in skeletal or outline form. The model essentially involves five interactive, interdependent sets of indicators considered to be determinants of

*See Attachment A

program impact (Fig. 1). The elements constituting each of the five subsystems of the evaluation model are presented, but not described, in Figure 2.

Following the outline of the emergent evaluation model is a listing of the indicators that have been identified in the available literature to date. The data on the indicators are uneven.

Following the presentation of the proposed evaluation model to be used in the project is a listing of the indicators that have been identified to date in the literature available to the staff. The data at this time on the indicators for each of the subsystems comprising the model are incomplete. For example, there are no indicators presented for the economics and social development subsystems. Such indicators do exist; however, the time constraint for this reporting prevented their inclusion. Nor should it be thought that the presented indicators are exhaustive. Again, the process of refining the model will be a continuous one.

D. Dissemination and Utilization of Research Results:

1. Project Output:

To date the project output consists of the literature review.

2. Dissemination:

The literature review is being submitted to the National Planning Authority in Jamaica

3. N/A

4. N/A

5. LDC participants and personnel will be involved in field testing the indicators derived from the literature review.

E. Work Plan for the Coming Year:

The work plan for the coming year will involve the following:

Task II

The second task is to conduct a brief study of several community education programs in an LDC using available descriptions and evaluations, interviews with managers, practitioners and participants and on site observation. In Jamaica, these programs will not be selected from among those included in the Jamaican Rural Community Education Project. Findings of the literature search will be used to guide these brief investigations which will not produce case studies per se, although a case study approach will be used. These small studies will test the relevancy of the literature search findings in the reality of a rural area in an LDC. The "mini studies" will provide a basis upon which to determine if the variables and the appropriate indicators derived therefrom do indeed seem to predict and/or describe what they are intended to.

The variables and indicators will then be modified and expanded using the findings of the field studies. At this point, it will be possible to formulate tentative instruments and methodologies for program evaluation and community analysis, hereafter referred to as the evaluation tools.

Task III

The third task will be to review the evaluation tools. This will be accomplished by a panel composed of the LDC participants, representatives of the country in which the investigations were conducted, USAID and AID/W representatives and at least two representatives of American academia. The evaluation tools will be modified on the basis of the recommendations of the review panel.

Tasks three and five represent decision points where the review panel may recommend that further development and/or modification of the outputs is required before proceeding to the next task. The use of outside expertise will be an important aspect of the three reviews scheduled in tasks three, five and seven.

Task IV

The fourth task is to test the instruments and methodologies by administering them in a number of communities where broad based education programs are being conducted. Communities will be chosen in which several types of education programs are being implemented under the sponsorship of various types of organizations; private, public and parastatal. These communities will not be from the JRC project. The data obtained will be tabulated and analyzed. The power of the instruments to identify, describe and evaluate will be judged by comparing these findings with the results of case studies of the same programs. The case studies conducted in this phase will be quite complete and will provide the basis to validate the instruments for the specific situations in which they were tested.

On the basis of the results of the field test of the evaluation tools, an assessment of their usefulness will be made and any indicated modifications incorporated. Also, on the basis of findings generated by the field test, programmatic recommendations will be formulated for consideration by the Ministry of Education Community Education Staff in planning and implementing their new community education program.

Task V

The fifth task will be another review by the same or a similar panel to that used in task three. The panel will evaluate the usefulness of the instruments and procedures, recommend modifications and review the findings and recommendations to be presented to the staff of the Jamaica project. There will be some overlap between the staff of the Ministry project and the research project. This will

facilitate the process of presentation and review of the findings and recommendations of the JRCE project.

Task VI

The sixth task is to conduct the full field test of the revised procedures. The context of the test will be the JRCE as well as some other communities where programs are being conducted by the Ministry of Education outside the JRCE program. The evaluation procedures in these projects will be implemented by MOE personnel working in the JRCE project. In addition, some other communities will be included where programs are being conducted by private and parastatal organizations. This mix will allow tests of varying project inputs and will help with the validation process. It will also help prevent the danger of not being able to separate the effects of the JRCE project inputs from other inputs.

Research project staff will participate in the tabulation and analysis of the findings and will assist as requested with the field implementation of the evaluation.

Task VII

Task number seven is to conduct a final panel review of the results of the evaluation conducted in task number six. The contractor will also present for review recommendations and specifications for further testing, modification and/or implementation of the project outputs.

The contractor, taking into account the review panels' recommendations, will organize and present the project outputs in the form of a set of manuals or handbooks. We anticipate that the instruments will require modification and further validation before full scale use in other situations. One aspect of the final report will be a proposal for a full scale validation of the instruments developed.

A Guidance Group composed of 7-10 scholars and practitioners jointly agreed to by AID and the contractors will be formed. This group will review and advise the contractor concerning detailed implementation plans, research design, evaluation instrument design, data gathering approach and other matters concerning the technical aspects of the activity. This Guidance Group will participate in tasks III, V and VII and will meet at other times throughout the project life as determined necessary by AID and the contractor.

It is estimated that a staff of approximately ten to fifteen will be required to conduct the field investigation phases. The contractor and TA/ERR will make every effort to fill these positions with practitioners from other LDCs. To the extent this is not possible - Tuskegee will employ Jamaican personnel or draw upon their own staff. It is highly probable that at least half the positions can be filled with LDC practitioners. The selection of the participants will be made by the governments of the country from which they come.

The education development plans of the home country of the participants will be reviewed and studied by Tuskegee Institute personnel and the participants to familiarize the project staff with the kinds of community education programs existing in these selected LDCs.

F. Involvement of Minority Personnel and Women

During the past program year the following minority personnel and women were involved in the project.

Black-American Males

- 1 Co-Director
- 1 Co-Director
- 1 Project Coordinator
- 1 Research Assistant
- 1 Project Coordinator
- 1 Materials and Training Specialist

Females

- 1 Secretary
- 2 Research Assistants
- 2 Consultants

EVALUATION INDICATORS

The objective of the literature review is to discover, describe and measure the determinants of the impact of rural community education programs in less developed countries at the levels of the individual, the community and the nation. It was thought that the literature review would reveal the state-of-the-art of developing measures--indicators--to more objectively assess program outcomes. The literature does reveal that the process of developing ways of measuring variables salient to successful achievement of program goals and objectives is at best a nebulous one. The literature of community development and community education lacks an adequate theoretical base, and, in consequence, its concepts are indefinite, and its terminology is loose. The problem becomes more complicated terminologically when viewed internationally. The so-called indicator movement offers little more by way of precision. Essentially, most writers assert that an indicator is "a measure of the attainment of results." The problem here is not so much in the definition but what type of results--short or long range, summative or formative, qualitative or quantitative.

Nevertheless, the literature review does suggest an evaluation model which is being described here in skeletal or outline form. The model essentially involves five interactive, interdependent sets of indicators considered to be determinants of program impact (Fig. 1). The elements constituting each of the five subsystems of the evaluation model are presented, but not described, in Figure 2.

Following the outline of the emergent evaluation model is a listing

of the indicators that have been identified in the available literature to date. The data on the indicators are uneven.

Following the presentation of the proposed evaluation model to be used in the project is a listing of the indicators that have been identified to date in the literature available to the staff. The data at this time on the indicators for each of the subsystems comprising the model are incomplete. For example, there are no indicators presented for the economics and social development subsystems. Such indicators do exist; however, the time constraint for this reporting prevented their inclusion. Nor should it be thought that the presented indicators are exhaustive. Again, the process of refining the model will be a continuous one.

INDICATORS

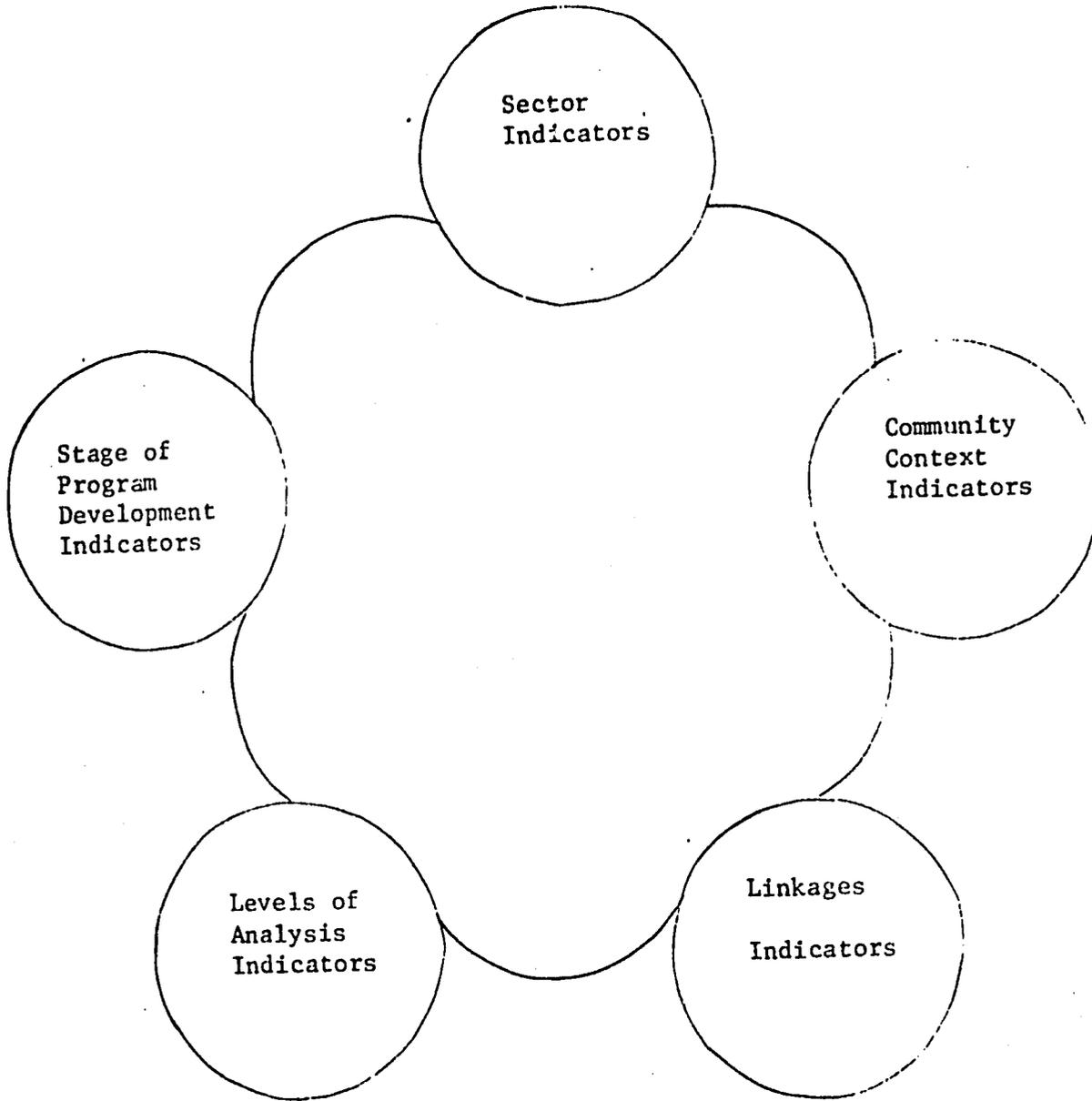


Figure 1. Evaluation Model Utilizing a System of Indicators

- I. Sector Indicators
 1. Agriculture
 2. Education
 3. Economic
 4. Public Works
 5. Social Development
 6. Health

- II. Stages of Program Development Indicators
 1. Planning Indicators
 2. Input Indicators
 3. Process Indicators
 4. Product Indicators

- III. Community Context Indicators
 1. Ecological, Demographic and Socioeconomic Indicators
 2. Community Organization and Integration Indicators
 3. Recent History Indicators
 4. Problem(s) Defined by Community Indicators
 5. Perception of Change Agent(s) Indicators

- IV. Level of Analysis Indicators
 1. Individual Indicators
 2. Community Indicators
 3. National Indicators

- V. Linkages Indicators
 1. Interagency Coordination and Cooperation Indicators
 2. Communication Network Indicators

Figure 2. Elements of Indicator System

SECTOR INDICATORS

SECTOR I: AGRICULTURE

Variables

1. Modern farming methods

Indicators

- a. % using fertilizer
- b. % using insecticide
- c. % using improved seed
- d. % using equipment
- e. % using tractors
- f. % practicing crop rotation
- g. % getting agricultural news
on radio

SECTOR INDICATORS

SECTOR II: EDUCATION

Individual Level

Program: A. Literacy

<u>Variables</u>	<u>Indicators</u>
1. Reading with comprehension	a. Average number of words read per minute b. Pronunciation
2. Writing with meaning	a. Legibility b. Correct use of punctuation marks c. Average number of words written per minute d. Reading and writing letters, messages, and other communications
3. Ability to solve simple questions on arithmetic involving addition, subtraction, multiplication and division	a. Maintaining household and/or occupational accounts
4. Knowledge of local weights and measures as well as scales and tools used in this country	

SECTOR INDICATORS

SECTOR II: EDUCATION

Community Level

Program: A. Literacy

Variables

Indicators

- | | |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Registration in functional literary courses | a. Proportion of those who registered in functional literacy courses to the total number for whom the program was prepared and who were expected to join. |
| 2. Drop-outs | a. Proportion of those who dropped out to those who registered. |
| 3. Successful completion of course | a. Proportion of those who passed the test to those who attended. |
| 4. Average attendance | a. Proportion of actual attendance during each course. |

SECTOR INDICATORS

SECTOR IV: PUBLIC WORKS

VARIABLES AND INDICATORS IN SELF-HELP HOUSING

This section includes some of the variables and indicators used to describe various aspects of self-help housing projects selected from five case studies in Colombia, El Salvador, Senegal, Ethiopia, and the Sudan (United Nations, 1973). The variables and indicators include various types of information for the target population, the community, participants' attitudes, and general indicators of program effectiveness. They are outlined below:

I. Demographic Aspects

- family size and composition (average size as compared to the national average; composition of family unit according to the percent of children, parents and other relatives, and outside persons living with the family)
- population by age and marital status (percent of participants married, unmarried, widowed, and living in free union; age of head of household)
- school age population (school ages of current inhabitants (7-14) number and percent of school age)
- level of education (number and percent of participants with highest level of education--primary, secondary, teacher's training courses, accounting courses, business and financial courses, university, illiterate, and schooling unknown)
- economic status (monthly family income; employed or unemployed)

II. Social and Cultural Aspects

- use of housing (use to which the housing built by self-help was put, as compared with its original purpose, ex. dining room used as a bedroom)
- needs felt by the community (ex. paved roads, better water supply as sewerage, schools, parks)

- community activities (extent of use and availability of churches, schools public health centers, cooperatives, and community centers)

III. Housing and Public Services

- condition of the houses (efforts made to improve or enlarge dwellings---number and percent unchanged, improved, and extended)
- public services (adequate water supply, sewerage, roads, etc.)

IV. Communal Facilities

- health (number of health centers, hospitals, maternal and child welfare clinics, etc.)
- educational services (number of adequate and inadequate schools)
- civic centers and commercial facilities (number of shops, artisan enterprises, and other establishments such as bakeries, hair-dressers, etc)

V. General Outcome Indicators

- number of families with housing in specified period
- number of organized groups of community leaders to serve in an advisory capacity
- percent of families expressing some degree of satisfaction in housing
- number of credit and consumer cooperatives formed
- extent of development of parks and other recreation areas

VI. Participants' Attitude Towards the Program

- attendance (number of participants attending on a regular basis)
- drop-outs (number of participants who desert the project)
- group finances (amount of contributions made to a group fund by each family to cover unanticipated costs)
- willingness to work (extra hours worked, expression of satisfaction with work)
- aspirations for improved housing (requests for additions to house such as brick floors, fences, gates, etc.)

- human problems (types of family problems such as poor health, limited income, conflicts within the family which impede the progress of the work)

VII. Other Factors Related to Program Effectiveness

- pre-training in building methods to equip the participants with minimum skills. Three of the case studies in self-help housing projects in El Salvador, Colombia, and Senegal suggest that no less than 25 percent of the participants of any given project should have some level of technical know-how.
- experienced builders spread out among the housing subgroups contributed considerably to the success of the project.
- the families must persevere. In the El Salvador project for example, the minimum time required to complete the standard house was 8 months. Thus, families must devote nearly all of their time for months to building the house.
- extent of home improvements and extensions indicates the extent of channelling family savings into housing
- vigorous kind of communal life of the families contributed to a well balanced project
- team work basic to self-help housing. For example, in the Senegal participants were divided into teams of 10. Each team had to construct five (5) 2-house units. It was better for 10 self-helpers to work together on one building than for each to work separately on 10 buildings.

Another example of a case study in self-help housing is the Kafue housing project, a pilot self-help, community development scheme that demonstrated a number of requirements basic to the successful completion of site and service projects wherever they may be undertaken. In planning and administration of the project, some of the basic indicators of effective implementation were identified as follows:

- thorough advance investigation of the housing situation in Kafue and of the desires and capabilities of the people of the community in regard to improved housing;

- careful alignment of the project's plan with national objectives and consonance with the existing legal/administrative/financial program of the national Government;
- close consultation with Zambian officials at all levels before initiating the project, thus building bridges and assuring cooperation from all sides;
- carefully planned selection and training of Zambian staff, drawing on resource people locally available to assist with the training;
- involvement of local people, with decisions taken at the basic level, utilizing a community decision-making process;
- daily provisions of needed materials and transportation to avoid delays and inconvenience and discouragement to the workers;
- sustained and flexible follow-through on all aspects of the project by Field Director and other staff;
- continuity of field supervision; the Field Director for the Kafue project remained the same from inception to near completion;
- strong participation throughout the construction phase by Zambian staff and Township Council officers in the promotion of community services and organization;
- utilization of local resources and creation of a broad constituency of interest.

In the recent United Nations publication (1973) Social Indicators for Housing and Urban Development, the Ad Hoc Group of Experts on Social Indicators for Housing and Urban Development proposed the following classification system of social indicators:

Level I: the household and its dwelling

Human needs that are satisfied by and through the dwelling itself form the framework for this level:

1. Measures of the condition of the dwelling structure; these relate to the need for shelter and climate control;

2. Measures of space seen in relation of household size (crowding) and the facilities and equipment of the dwelling; these relate to the need for space to facilitate household activities;
3. Measures of housing costs as against income or consumption; these relate to the importance of surplus resources beyond expenditure for food and shelter;
4. Measures of tenure status; these relate to the imperative of securing freedom of choice and influence over one's own life and situation.

Level II: the immediate housing environment or community

The following list is organized with respect to categories of activities seen as essential in the existence of all people. The basic question here is the availability and/or accessibility of various functions and services:

1. Energy (electricity, gas, fuel, etc.);
2. Transportation (roads and vehicles);
3. Renovation (waste and pollution);
4. Work and vocation (composition of work opportunities and distance)
5. Areas and institutions for children's activities (playgrounds, day-care centers, nursery schools, etc.);
6. Goods and services (all kinds of shops and services, including government);
7. Health (doctors, hospitals, drugs);
8. Education (schools);
9. Recreation (organizations, entertainment, creative activities, public places, etc.);

In addition to descriptions of the separate elements listed above, certain structural phenomena at this level seem to be of great importance:

1. Physical structure:

- a. Densities and the problem of privacy;
- b. Degree of zoning and segregation/intergration of functions;
- c. Traffic-separation and the problem of safety;
- d. Noise and the degree of pollution;

2. Social structure:

Freedom of movement among social groups, and its opposite: the formation of ghettos, in so far as this is determined by the location and lay-out of housing.

Level III: the larger societal context

At this level it is no longer a question of indicators or measures as at levels I or II, but rather one of broader characterizations that state the 'broader conditions' for housing in any country's political/economic system. The following are examples of important issues:

1. Employment opportunities and policies/practices with respect to employment location and the degree to which this results in maldistribution of jobs and wealth; or in redistribution of the population;
2. Policies/practices of financing housing. Governmental systems of subsidies;
3. The structure of the housing market as revealed in the degree of choice available to the single household. The procedures for change and allocation for housing; political opportunities and/or procedures for participation in the influence on housing policy for households or the population at large.

SECTOR INDICATORS

SECTOR IV: PUBLIC WORKS

Variables

Indicators

1. Social improvement

- a. % using improved water source
- b. % out-migration
- c. New houses and additions

1. Water use

- a. % using improved drinking water source
- b. % of villages with RTG well
- c. % of villages maintaining RTG well
- d. Average distance to drinking water source
- e. % with nearer source than one used
- f. Average distance to domestic water source
- g. % with nearer source than one used

1. Village sanitation

- a. % of villages with latrines
- b. % of households with animal dens constructed
- c. % of villages with most houses fenced
- d. % of villages with adequate road drainage

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: Family Planning

Variables

Indicators

- | | |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1. Acceptance * | a. Response rates
b. Life table continuation rates
c. Age - Specific fertility rates |
| 2. Public acceptance | a. The passage of pertinent social legislation. |
| 3. Primary acceptance (overall) | a. Willingness to try as evidence by having ever used the "pill" or by stating likelihood of possibility of future use. |
| 4. Continuing acceptance | a. The proportion of women starting with the pill who used it for a specified length of time. |
| 5. Current acceptance | a. The prevalence of pill use at the time of record. |

* The taking of service and/or advice from a family planning program, i.e. having an IUD insertion or receiving pills, etc.

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: Family Planning

Variables

1. Effectiveness *

Indicators

- a. Number of couples who accepted family planning directly from the family planning program clinics or representatives.
- b. Total number of acceptors twelve (12) months after the commencement of the international post-partum program.
- c. Monthly or cumulative number of acceptors.
- d. Changes in knowledge, attitudes and practice regarding family planning.
- e. Changes in levels of acceptance, or in existing levels of contraception.
- f. Birth rate

* The monthly rate at which a target population "accepts" (methods) from a family planning program.

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: Family Planning - Fertility Measures

<u>Variables</u>	<u>Indicators</u>
1. Children ever born	a. Total children ever born per 1000 (by age, race, marital status and sex).
2. Children under one year	a. Children under one year at time of census per 1000 women.
3. Parity	a. Number of children ever born minus the number of children under one year per 1000 women.
4. Childless	a. Number of women with zero children ever born per 1000.
5. General fertility rate	a. Number of vital statistics births per 1000 women aged 15-44 reported by census.
6. Age - Specific fertility rate	a. Number of vital statistics births per 1000 women of a given age per 1000 women of the same age.
7. Marital fertility rate	a. Number of legitimate births reported by vital statistics per 1000 named, spouse-present wives reported by census.

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: Family Planning

Variables

1. Fertility

Indicators

- a. Pregnancy rate
- b. Birth rate
- c. Marital status
- d. Date of birth/age
- e. Number of children ever born, M/F
- f. Number of children living, M/F
- g. Gross reproduction rate
- h. Parity specific fertility rates,
including parity progression ratios
- i. Open pregnancy or live birth interval

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: Family Planning

Variables

Indicators

- | | |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| 1. Program enrollment | a. Number of patients in organized family planning programs per 1000 women in need.* |
| 2. Need | a. Number of women below 200% of poverty who are sexually active, fecund, and not pregnant or planning pregnancy.* |
| 3. Agencies | a. Number of agencies directly or indirectly providing family planning services. |
| 4. Agent types | a. Number of types of agencies providing family planning services in an area.** (4 types) |
| 5. Locations | a. Number of clinic locations providing family planning services. |

* Not specific to age, race or marital status.

** Four types are health departments, hospitals, planned parenthood, and affiliates.

SECTOR INDICATORS

SECTOR VI: HEALTH

Program: General Care Measures

Variables

Indicators

1. Doctors

- a. Number of primary-care physicians and osteopaths per 1000 women aged 15-44.

2. Visits

- a. Number of visits of outpatient clinics in hospitals providing family planning services per 1000 visits to outpatient clinics in all hospitals; visits are not necessarily for the purpose of family planning.

3. Infant mortality rate

- a. Infant deaths per 1000 births recorded by vital statistics.

4. Fertility rates

- a. Number of children under one year per 1000 women.
- b. Number of vital statistics births per 1000 women aged 15-44.

COMMUNITY CONTEXT INDICATORS

ECOLOGICAL, DEMOGRAPHIC, AND
SOCIO-ECONOMIC VARIABLES *

<u>Variables</u>	<u>Indicators</u>
1. Age	a. % of people in specified age groups b. Average age
2. Income level	a. Average income per year
3. Sex	a. % male and % female
4. Ethnic background	a. % of people in specified ethnic groups
5. Marital status	a. % of people married, unmarried, widowed, separated, living in free union, never married
6. Population density	a. Total population/square mile (P) b. $\text{Log}(P) = \text{Density}$ c. $\text{Log}(1/D)$
7. Level of education	a. % of persons with specified levels of education b. Average number of years completed
8. Occupations	a. % of people in various occupations
9. Religious denomination	a. % of people with various religions
10. In-migration	a. Number of persons per 1000 residents, living outside their country of residence for the last five years
11. Rural	a. Number of persons per 1000 persons living in rural areas
12. Labor force participation	a. Number of persons in the labor force per 1000 persons
13. Public assistance	a. Number of persons receiving public assistance per 1000 women
14. In-school	a. Number of people in school

Variables

Indicators

15. Infant mortality rates
(by region)

a. Number of living children (rural
vs urban)

16. Mobility plans

a. % of those stating intent to move

* These variables and their indicators have general applicability to most sectors of development.